

The Independent Maintenance Market in Western Europe

Keith Hocking
Managing Director
INPUT Europe



Theme

- Market forecast
- Country markets
- Key players
- Emerging trends

INPUT

Notes:

CSPA-KH-2



1988 Survey Parameters

- 1,348 user interviews—5% TPM
- 75 TPM vendor interviews

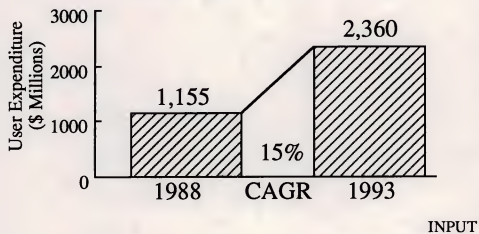
INPUT

Notes:

CSPA-KH-3



European Independent Maintenance Market Forecast, 1988-1993



Notes:

CSPA-KH-3a



Independent Maintenance Market, 1988



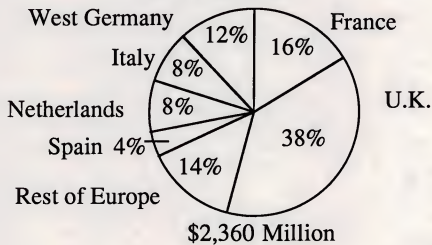
INPUT

Notes:

CSPA-KH-4



Independent Maintenance Market, 1993



INPUT

Notes:

CSPA-KH-5



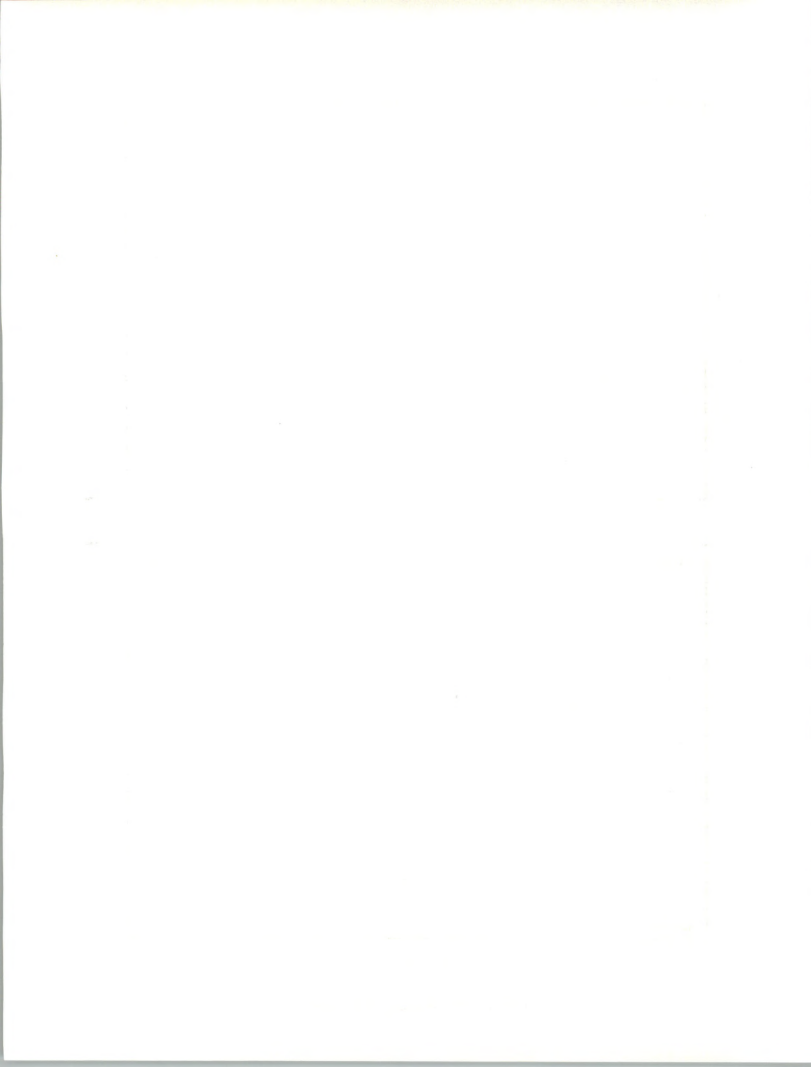
Market Dynamics

- Geographic characteristics
- Non-European product sales
- Multinational trend
- Mergers and acquisitions

INPUT

Notes:

CSPA-KH-6



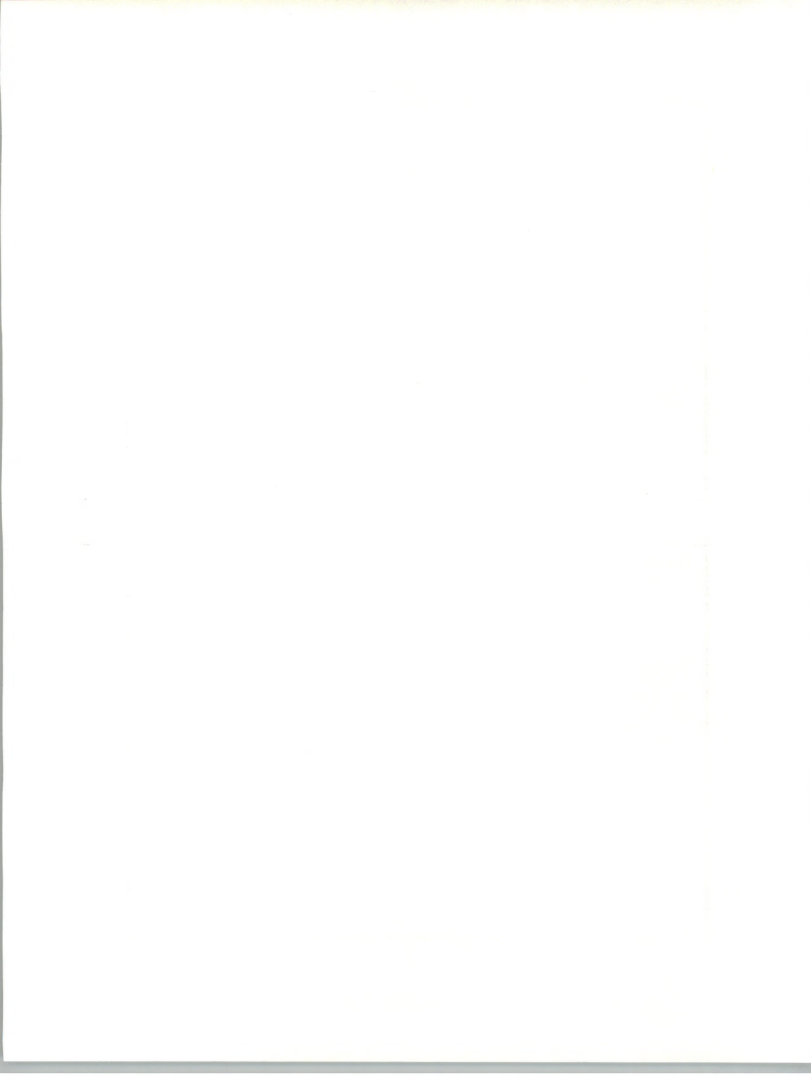
Market Characteristics

- Largest market: U.K. \$440 M 1988
- Fastest growth: Spain CAGR 25%
- Hardware manufacturers' entry
- Prime contracting

INPUT

Notes:

CSPA-KH-7



Western European Independent Maintenance—Key Activists

- Hardware manufacturers
 - Multivendor service
- Third-party maintenance companies
 - Key business activity
- Dealers and distributors
 - Support sales

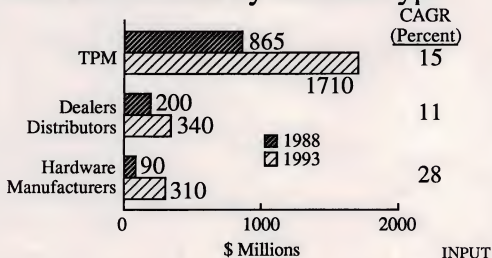
INPUT

Notes:

CSPA-KH-8



Independent Maintenance Market Forecast by Vendor Type



Notes:

CSPA-KH-9



Major European TPM Companies, 1988

	\$ Millions	TPM Market Share
Granada	152	18
Sorbus	53	6
Geveke	28	3
IBIMaint	27	3
Telub	26	3

33% of TPM Market

INPUT

Notes:

CSPA-KH-10

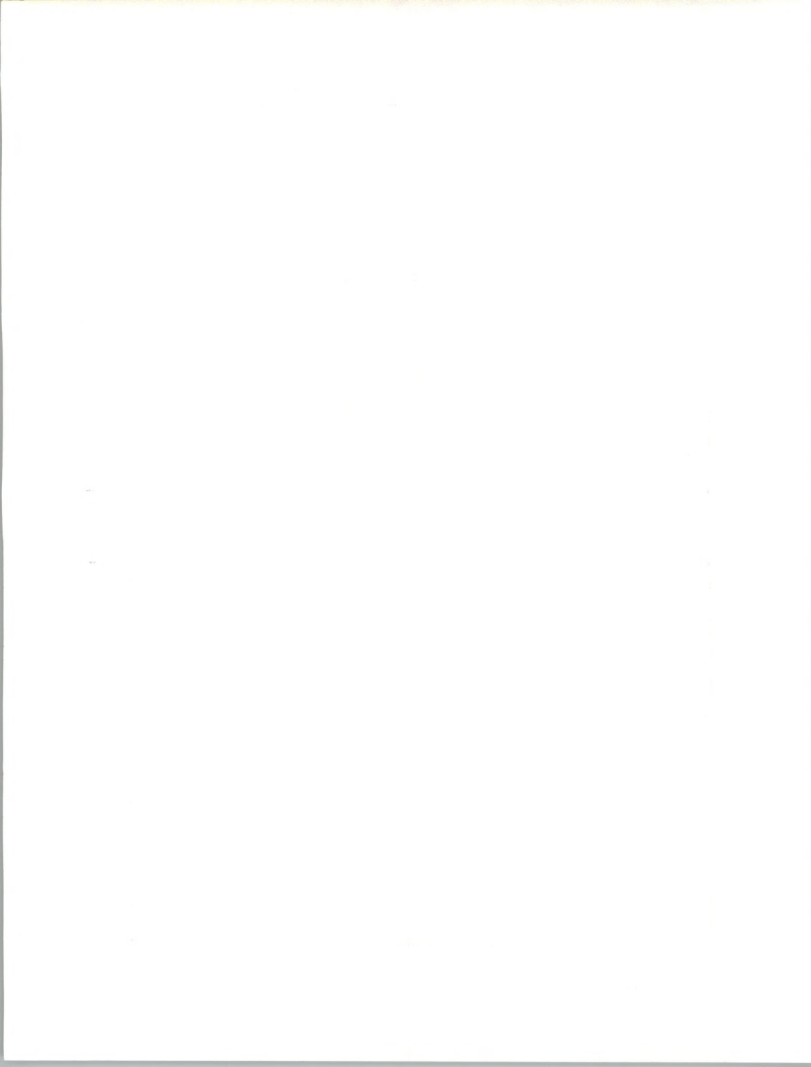


Western European Country Markets

INPUT

Notes:

CSPA-KH-11



Major Country Markets 1988

	\$ Millions
U.K.	436
France	180
West Germany	155

67% of Western Europe

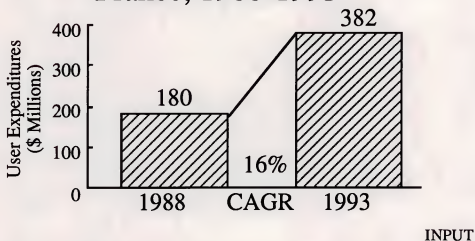
INPUT

Notes:

CSPA-KH-12



Independent Maintenance Market Growth France, 1988-1993



Notes:

CSPA-KH-13



Independent Maintenance Market Forecast—France

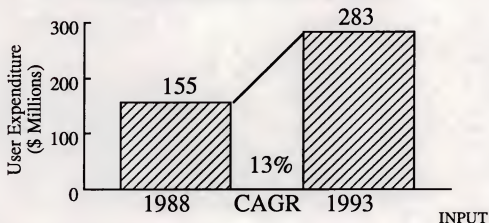
	\$ Millions		CAGR (%)
	1988	1993	
TPM Vendors	144	302	16
Dealers & Distributors	26	43	11
Hardware Manufacturers	10	37	30
Total	180	382	16 INPUT

Notes:

CSPA-KH-14



Independent Maintenance Market Growth West Germany, 1988-1993



Notes:

CSPA-KH-15



Independent Maintenance Market Forecast—West Germany

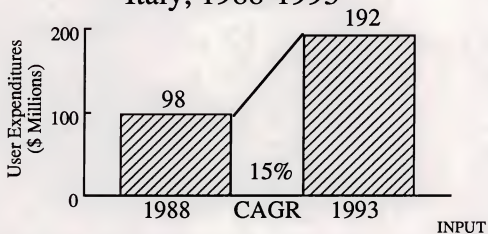
	\$ Millions		CAGR (%)
	1988	1993	
TPM Vendors	90	170	13
Dealers & Distributors	62	105	11
Hardware Manufacturers	3	8	20
Total	155	283	13 INPUT

Notes:

CSPA-KH-16



Independent Maintenance Market Growth Italy, 1988-1993



Notes:

CSPA-KH-17



Independent Maintenance Market Forecast—Italy

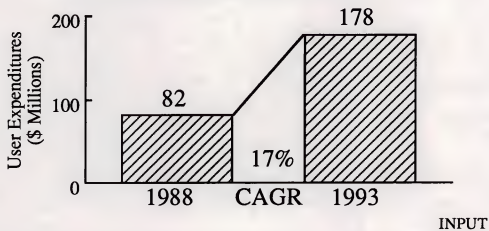
	\$ Millions		CAGR (%)
	1988	1993	
TPM Vendors	66	125	14
Dealers & Distributors	30	52	12
Hardware Manufacturers	2	15	58
Total	98	192	15 INPUT

Notes:

CSPA-KH-18



Independent Maintenance Market Growth Netherlands, 1988-1993



Notes:

CSPA-KH-19



Independent Maintenance Market Forecast—Netherlands

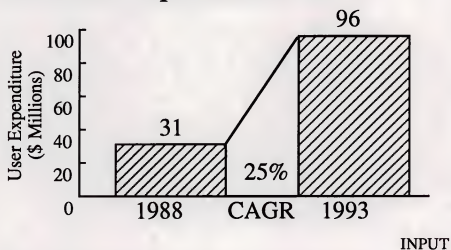
	\$ Millions		CAGR (%)
	1988	1993	
TPM Vendors	76	156	16
Dealers & Distributors	6	12	14
Hardware Manufacturers	-	10	78
Total	82	178	17 INPUT

Notes:

CSPA-KH-20



Independent Maintenance Market Growth—Spain, 1988-1993



Notes:

CSPA-KH-21



Independent Maintenance Market Forecast—Spain

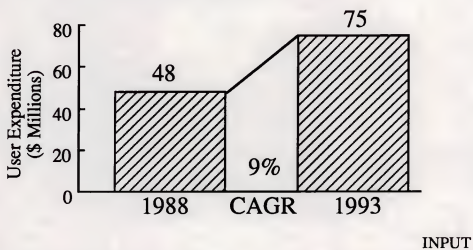
	\$ Millions		CAGR (%)
	1988	1993	
TPM Vendors	18	60	27
Dealers & Distributors	6	11	14
Hardware Manufacturers	7	25	27
Total	31	96	25 INPUT

Notes:

CSPA-KH-22



Independent Maintenance Market Growth—Sweden, 1988-1993



Notes:

CSPA-KH-23



Independent Maintenance Market Forecast—Sweden

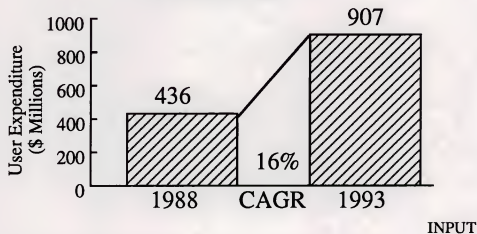
	\$ Millions		CAGR (%)
	1988	1993	
TPM Vendors	34	48	7
Dealers & Distributors	14	24	11
Hardware Manufacturers	-	3	60
Total	48	75	9 INPUT

Notes:

CSPA-KH-24



Independent Maintenance Market Growth—United Kingdom, 1988-1993



Notes:

CSPA-KH-25



Independent Maintenance Market Forecast—United Kingdom

	\$ Millions		CAGR (%)
	1988	1993	
TPM Vendors	339	678	15
Dealers & Distributors	29	51	12
Hardware Manufacturers	68	178	21
Total	436	907	16 INPUT

Notes:

CSPA-KH-26



The TPM Arena

- Why TPM?
- Why not TPM.

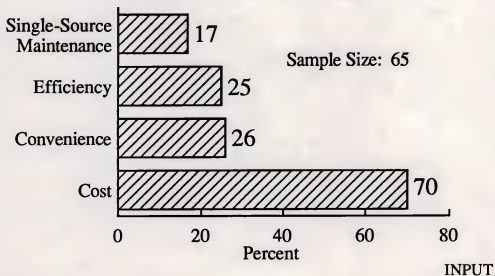
INPUT

Notes:

CSPA-KH-27



User Reasons for Choosing TPM

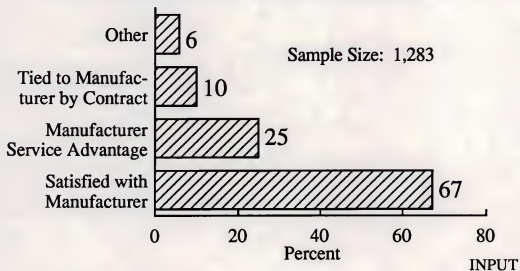


Notes:

CSPA-KH-28



User Reasons for Not Using TPM



Notes:

CSPA-KH-29



Primary Growth Factors

- TPM vendors—single source
- Users—price

INPUT

Notes:

CSPA-KH-30



Satisfaction with Price

- TPM user $\Delta SI = 1.2$ (Sample 65)
- Overall user sample $\Delta SI = 1.3$ (Sample 1,348)

INPUT

Notes:

CSPA-KH-31



Primary Factors Inhibiting Growth

- TPM vendors - Longer warranties and manufacturer competition
- Users - Prefer manufacturer

INPUT

Notes:

CSPA-KH-32



Future of Independent Maintenance

- Manufacturer multivendor activities
- Mergers and acquisitions
- Formal quality standards
- Multinational TPM

INPUT

Notes:

CSPA-KH-33



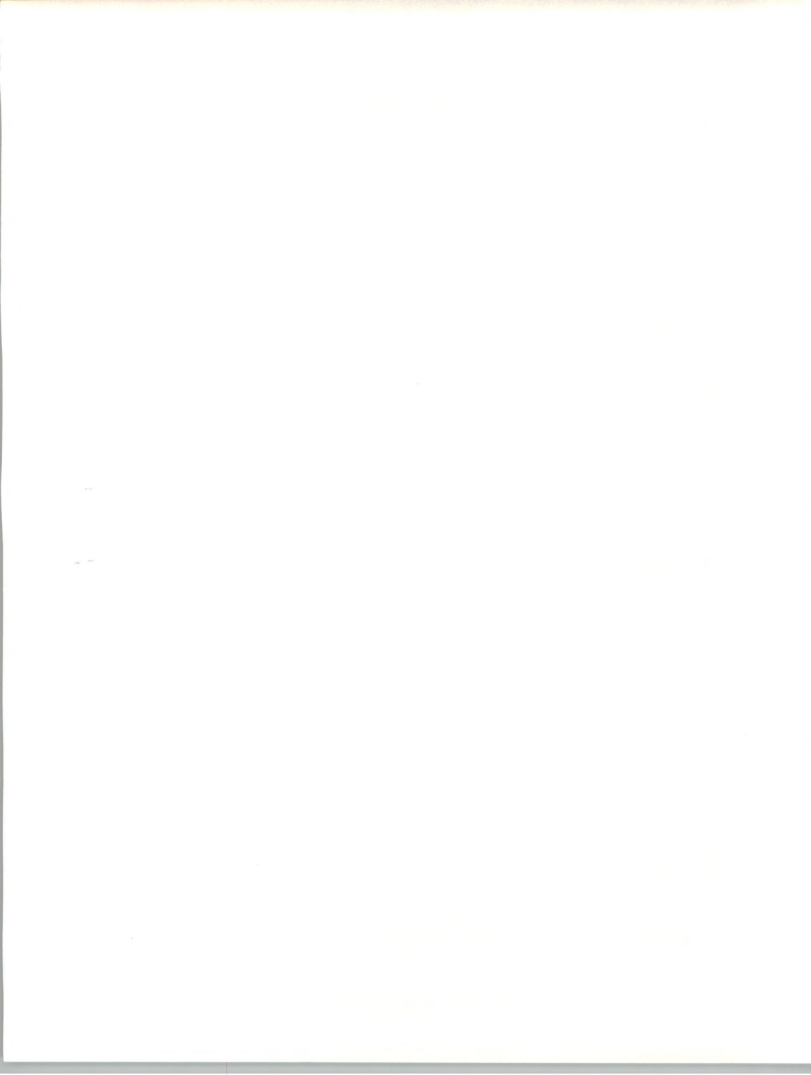
Future of Independent Maintenance

- TPM niche markets
- TPM critical mass

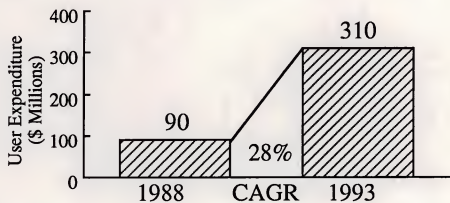
INPUT

Notes:

CSPA-KH-34



Manufacturer Growth



INPUT

Notes:

CSPA-KH-35



Granada Acquisitions

- | | |
|------------|-------------------------|
| • European | SMS
DPCE
Mainstay |
| • France | Infomat
Intersystem |
| • Germany | WIGO |
| • U.K. | CFM |

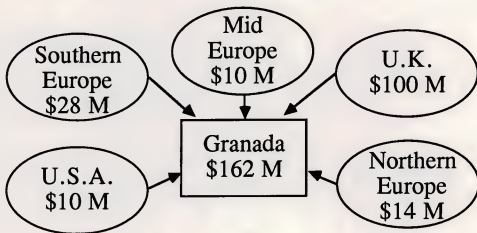
INPUT

Notes:

CSPA-KH-36



Granada Road Map



INPUT

Notes:

CSPA-KH-37



TPM Critical Mass

- 1986 Bell Atlantic acquired Sorbus
- 1988 Sorbus acquired Bell Canada Int.
 - Bell Technical Services U.K.
 - Eurotech Services France/Italy
 - Dataway Germany
- Sorbus name adopted in U.K. and France

INPUT

Notes:

CSPA-KH-38



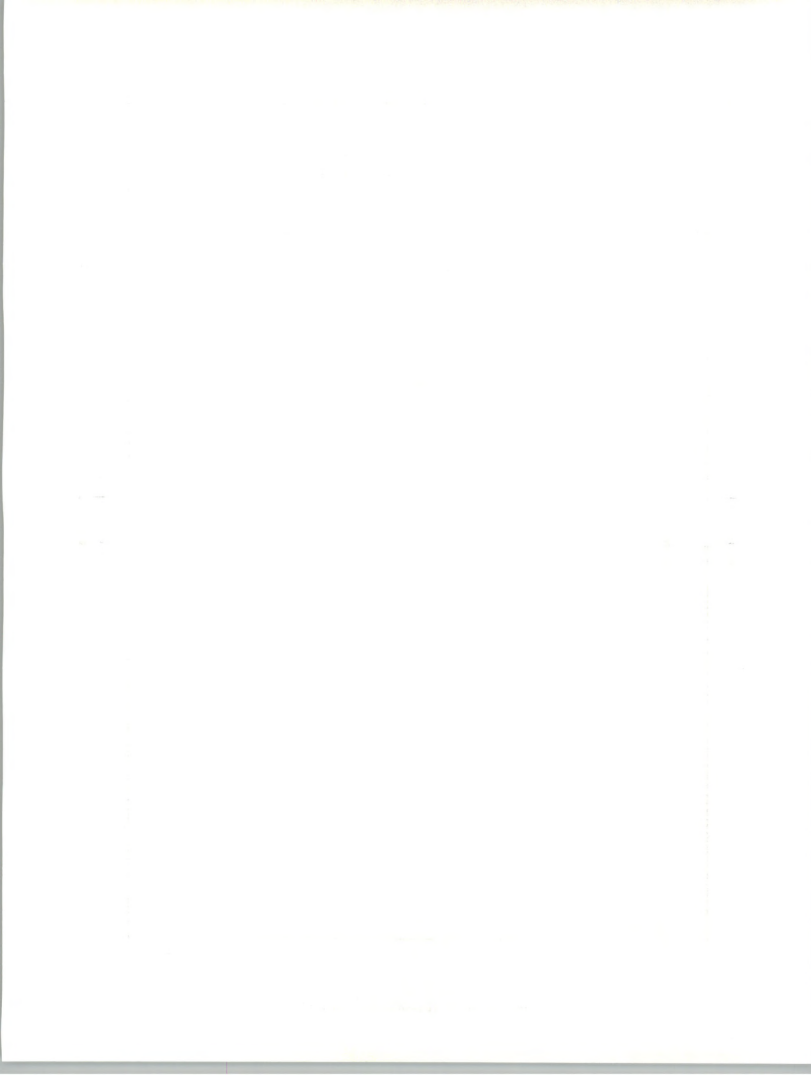
TPM Expansion

- Geographic
 - 1988 Telub, leading TPM in Scandinavia, acquired Bitronic in Germany
- Diversification
 - 1989 Concept, a leading software and services company, acquired Spectral and MIS in France

INPUT

Notes:

CSPA-KH-39



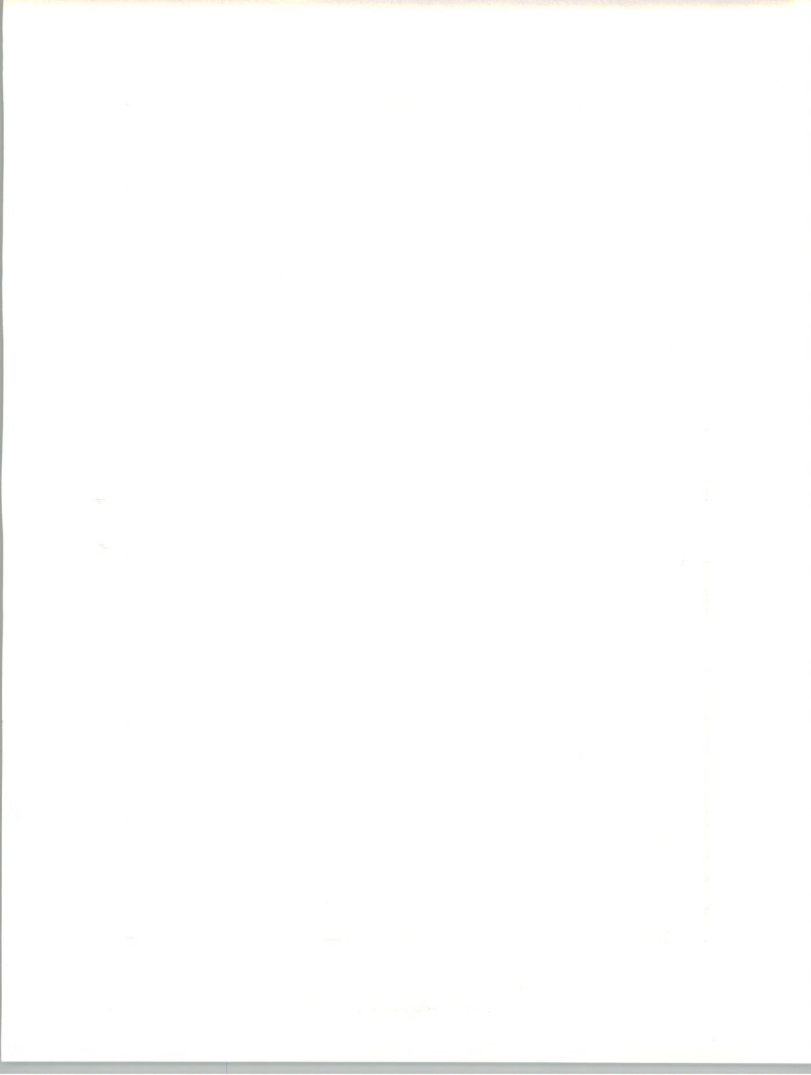
TPM Expansion

- Small acquires large
 - 1989 El Tec, leading TPM in Spain, acquired by Morsa
- Manufacturer activity
 - 1986 Olivetti acquired 65% share of IBI Maint, leading TPM in Italy

INPUT

Notes:

CSPA-KH-40



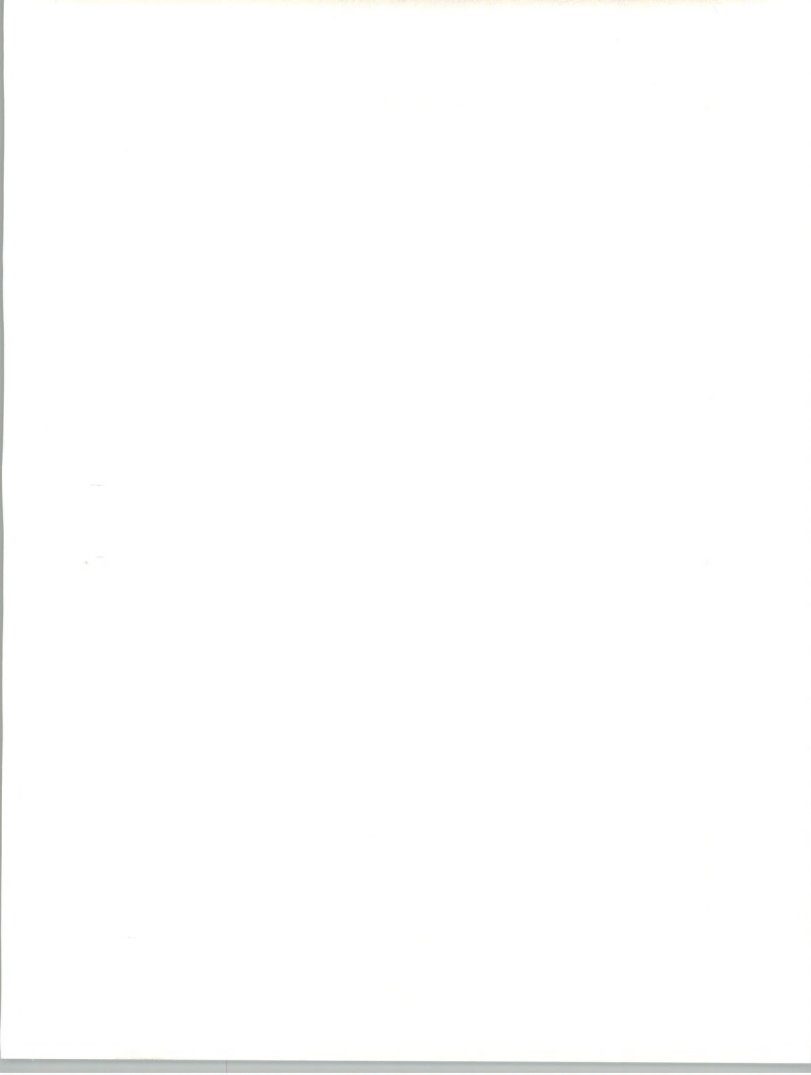
INPUT Recommendations for TPMs

- Critical mass
- Specialisation
- Niche markets
- Vertical markets

INPUT

Notes:

CSPA-KH-41



TPM Market Hierarchy 1987

Companies
(Percent)

5

15

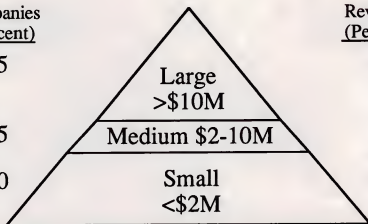
70

Revenues
(Percent)

40

15

45



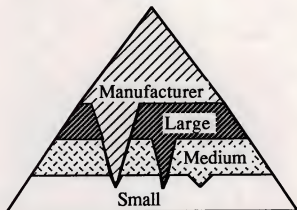
INPUT

Notes:

CSPA-KH-42



TPM Market Hierarchy 1993



INPUT

Notes:

CSPA-KH-43



Independent Maintenance Conclusions

- TPM dominance
- Manufacturers' high growth

INPUT

Notes:

CSPA-KH-44

Independent Maintenance Conclusions

- 11% market share 1988
- 15% market share 1993

INPUT

Notes:

CSPA-KH-45



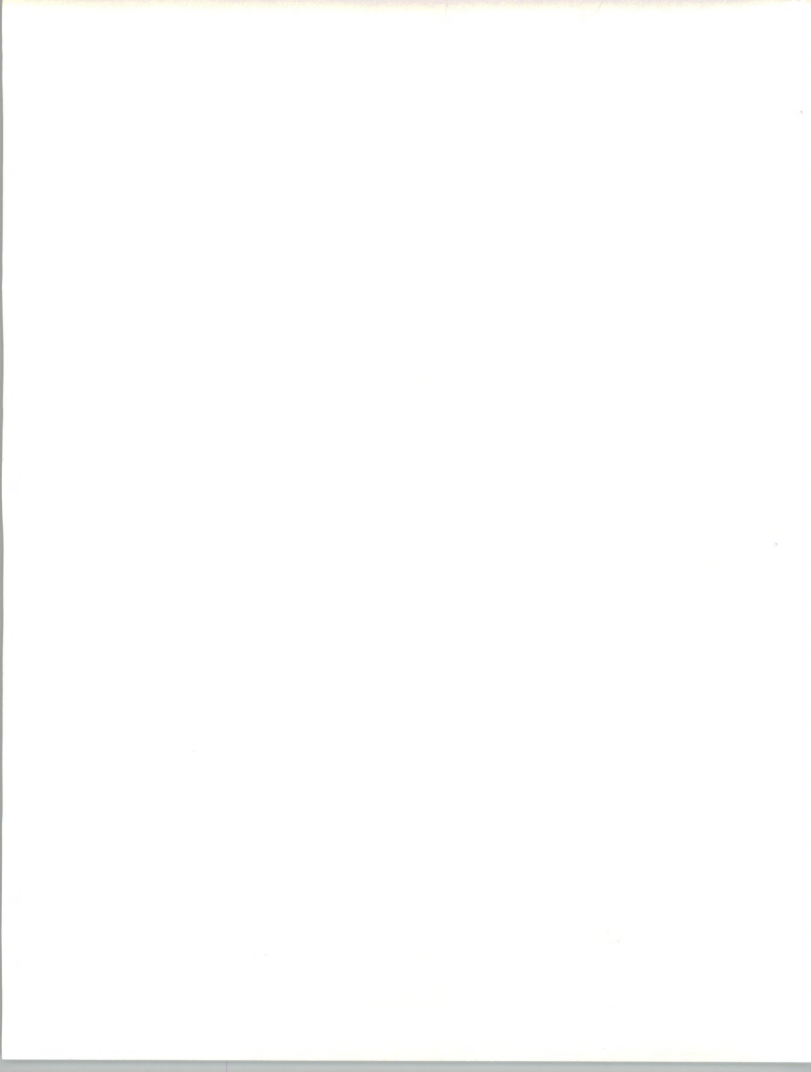
Independent Maintenance Conclusions

- TPM market growth three times larger than hardware maintenance

INPUT

Notes:

CSPA-KH-46



Keith W. L. Hocking
Vice President, Managing Director
INPUT

Keith W. L. Hocking is Vice-President and Managing Director of INPUT, Ltd. He has more than 20 years of experience in the computer industry in systems analysis, marketing, sales, and commercial applications design. He has held management positions with Deltak Limited and Philips Electrologica, Ltd.

Mr. Hocking holds a B.Sc., A.R.C.A. degree from Imperial College, London.



QUALITY CONTROL PROOFREADING SIGNOFF

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PROJECT CODE _____

AUTHOR _____

DATE TO PROOFREADER	TO BE PROOFED BY	INITIAL	DATE
4/4/89	Steve Eng	SE	4/4/89
4/8/89	Steve Eng	SE	4/8/89
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WORK SPECIFICATIONS

DATE OF PRESENTATION: _____

Additional Information _____

- ☒ 35mm Slides _____
☐ Foils _____
☐ Exhibits _____
☐ Questionnaire _____
☐ Letter _____
☐ Business Card _____
☐ Note Paper _____
☐ Newsletter _____
☐ News Release _____
☐ Form _____
☐ Brochure _____
☐ Cover Design _____
☐ Other _____

Number of pages submitted _____ Text _____
_____ Graphics _____

SPECIAL INSTRUCTIONS

PRINTING SPECIFICATIONS

- Quantity/Slides/Foils _____ 46 _____
Quantity/Hard Copy _____
Paper Size _____ X _____
Finished Size _____ X _____
Number of Pages _____
☐ Outside Printer _____
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☐ Three hole punch _____
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☐ Binding _____
☐ Cover _____
☐ Paper Color _____
☐ Ink Color _____
☐ Copyright Paper _____
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☐ Pad _____
☐ Saddle Stitch _____
☐ Box _____
☐ Shrink Wrap _____
☐ Staple ☐ Corner ☐ 2 on side _____

MAILING SPECIFICATIONS

Envelope: ☐ No. 10 ☐ 9 x 12 ☐ 10 x 13 ☐ Reply Envelope Quantity _____
☐ First Class ☐ Bulk ☐ Address Labels (Zip Code Order)

Enclosures:

- ☐ Letter _____
☐ Questionnaire _____
☐ Newsletter _____
☐ News Release _____
☐ Form _____
☐ Brochure _____
☐ Business Reply Envelope _____
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☐ Shelf Stock _____
☐ NJ _____
☐ DC _____
☐ London _____
☐ Paris _____
☐ Japan _____

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P. 1

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FAX: (01) 829 0179**FAX TRANSMITTAL FORM**DESTINATION : INPUT M.V.
FAX NUMBER : 0101 415 961 3966
ATTENTION : ANDREA JERRIS

Telephone Number/Location _____

NUMBER OF PAGES: 1 of 4CONFIDENTIAL CORRESPONDENCE : YES _____ NO ☒URGENT : YES ☒ NO _____

DESCRIPTION

1/ FINAL CHANGES TO KEITH HOCKING
INDEPENDENT MAINTENANCE PRESENTATION.
UPDATE TO KH 10 & KH 31
2/ ONE ADDITIONAL SLIDE TO OPEN
CONFERENCE
MANY THANKS *[Signature]*

FROM : KEN CARTERDATE : 11 APRIL 1989

INPUT : _____

Project Charge Code: CSPE



Major European TPM Companies, 1988

	\$ Millions	TPM Market Share
Granada	134 152	16 18
Sorbus	53	6
Geveke	28	3
IBIMaint	27	3
Telub	26	3

33% ~~30%~~ of TPM Market

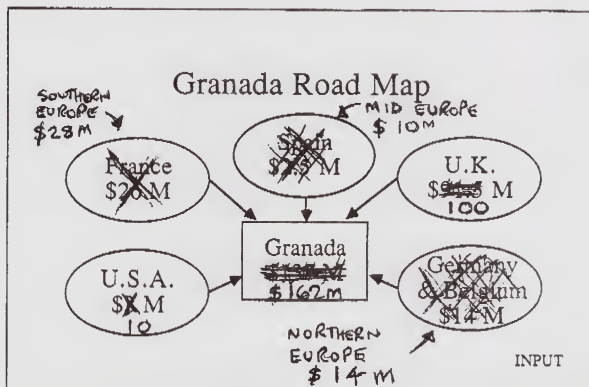
INPUT

Notes:

CSPA-KH-10

Journal of
Management Education





Notes:

CSPA-KH-37



FROM INPUT LTD

4.11.1989 17:47

P. 4

CUSTOMER
SERVICE
INDUSTRY
FORUM
1989-1994

INPUT



FROM INPUT LTD

4. 7.1989 17:38

P. 1

INPUT

PICCADILLY HOUSE
33/37 REGENT STREET, LONDON SW1Y 4NP
TEL: (01) 493 9335 TELEX: 27113
FAX: (01) 629 0179

FAX TRANSMITTAL FORM

DESTINATION : INPUT MV
FAX NUMBER : 0101 415 961 5966
ATTENTION : SHERA COLLINS
Telephone Number/Location _____

NUMBER OF PAGES: 1 of 4

CONFIDENTIAL CORRESPONDENCE : YES _____ NO _____

URGENT : YES _____ NO _____

DESCRIPTION

CORRECTIONS TO KETH HOCKING'S
INDEPENDENT MAINTENANCE PRESENTATION.
THERE MAY BE SOME MINOR CHANGES
TO SLIDES KH 10 & KH 37. AWAIT
INFORMATION ON THIS WILL HOUSE MONDAY
10 APRIL

FROM : KEN CARTER

DATE : 7 APRIL 1989

INPUT : _____

Project Charge Code: CSPE

Independent Maintenance Market Forecast—Italy

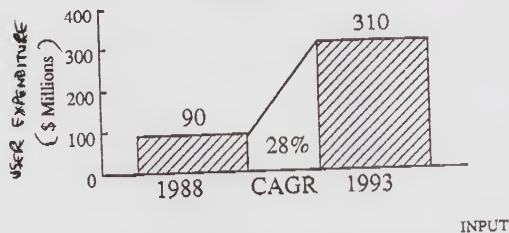
	\$ Millions		CAGR (%)
	1988	1993	
TPM Vendors	66	125	14
Dealers & Distributors	30	52	12
Hardware Manufacturers	2	15	50 58
Total	98	192	15 INPUT

Notes:

CSPA-KH-18



Manufacturer Growth



Notes:

CSPA-KH-35

FROM INPUT LTD

4. 7. 1989 17:39

P. 3

~~No Title~~
THE TPM ARENA

- Why TPM?
- Why not TPM.

INPUT

Notes:

CSPA-KH-27



The Independent Maintenance Market in Western Europe

Keith Hocking
Managing Director
INPUT Europe

Theme

- Market forecast
- Country markets
- Key players
- Emerging trends

INPUT

Market Dynamics

- Geographic characteristics
- Non-European product sales
- Multinational trend
- Mergers and acquisitions

INPUT

Market Characteristics

- Largest market: U.K. \$440 M 1988
- Fastest growth: Spain CAGR 25 %
- Hardware manufacturers' entry
- Prime contracting

INPUT

INPUT

Western European
Independent Maintenance
Key Activists

1988 Survey Parameters

- 1,348 user interviews, 5% TPM
- 75 TPM vendor interviews

INPUT

INPUT

- Hardware manufacturers
 - Multivendor service
- Third-party maintenance companies
 - Key business activity
- Dealers and distributors
 - Support sales

2

1

7

2

2

2

11

Western European
Country Markets

A. ok? →

No Title

- Why TPM?
- Why not TPM

INPUT

30

Primary Growth Factors

- TPM vendors – single source
- Users – price

INPUT

Satisfaction with Price

- 37
- TPM user $\Delta SI = 1.2$
(Sample 65)
 - Overall user sample $\Delta SI = 1.3$
(Sample 1,348)

INPUT

Primary Factors
Inhibiting Growth

- 32
- TPM vendors – Longer warranties
and manufacturer competition
 - Users – Prefer manufacturer

INPUT

Future of Independent
Maintenance

- 33
- Manufacturer multivendor activities
 - Mergers and acquisitions
 - Formal quality standards
 - Multinational TPM

INPUT

18.

11

39

50

33

30

Future of Independent Maintenance

34

- TPM niche markets
- TPM critical mass

INPUT

Granada Acquisitions

36

European	SMS DPCE Mainstay
France	Infomat Intersystem
Germany	WGO
U.K.	CFM

INPUT

TPM Critical Mass

- 1986 Bell Atlantic acquired Sorbus
- 1988 Sorbus acquired Bell Canada Int.
 - Bell Technical Services - U.K.
 - Eurotech Services - France/Italy
 - Dataway - Germany
- Sorbus name adopted in U.K. and France

INPUT

TPM Expansion

- Geographic
 - 1988 Telub, leading TPM in Scandinavia, acquired Bitronic in Germany
- Diversification
 - 1989 concept, a leading software and services company, acquired Spectral and MIS in France

INPUT

TPM Expansion

- Small acquires large
 - 1989 El Tec, leading TPM in Spain, acquired by Morsa
- Manufacturer activity
 - 1986 Olivetti acquired 65% share of IBM Maint, leading TPM in Italy

INPUT

INPUT Recommendations for TPMs

- Critical mass
- Specialisation
- Niche markets
- Vertical markets

INPUT

39

40

A.
← ok?

41

98

98

04

04

14

14

Independent Maintenance

Conclusions

44

- TPM dominance
- Manufacturers' high growth

INPUT

Independent Maintenance

Conclusions

45

- 11% market share 1988
- 15% market share 1993

INPUT

Independent Maintenance

Conclusions

46

- TPM market growth three times larger than hardware maintenance

INPUT

← A.

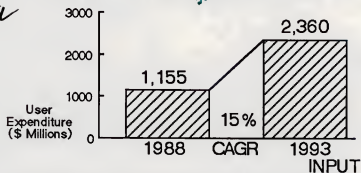
Big question
mark at end
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134

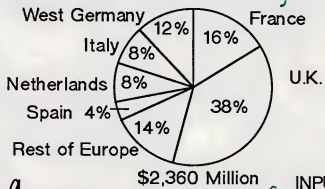
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24

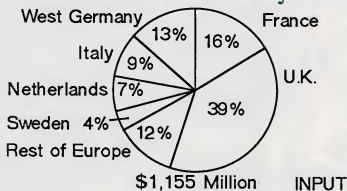
3 a European Independent Maintenance Market Forecast, 1988-1993



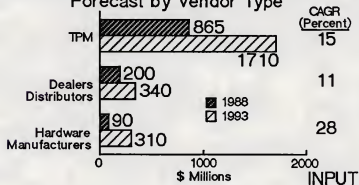
5 Independent Maintenance Market, 1993



4 Independent Maintenance Market, 1988

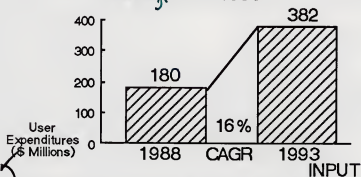


9 Independent Maintenance Market Forecast by Vendor Type

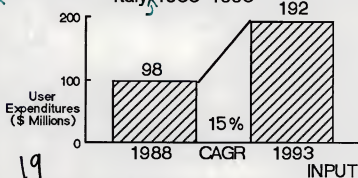




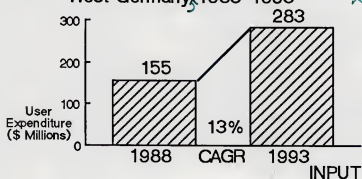
13

Independent Maintenance Market Growth
France, 1988-1993

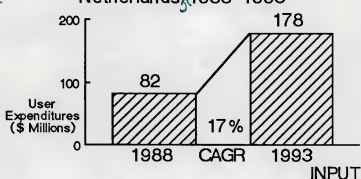
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Independent Maintenance Market Growth
Italy, 1988-1993

15

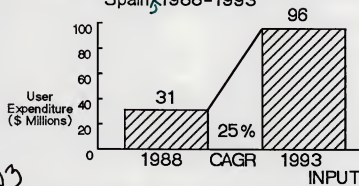
Independent Maintenance Market Growth
West Germany, 1988-1993

19

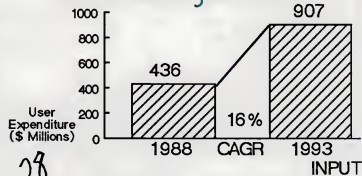
Independent Maintenance Market Growth
Netherlands, 1988-1993



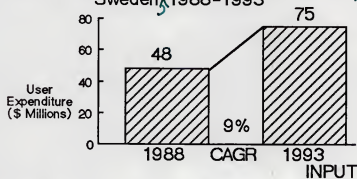
21 Independent Maintenance Market Growth Spain, 1988-1993



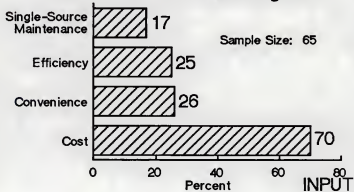
25 Independent Maintenance Market Growth United Kingdom, 1988-1993



23 Independent Maintenance Market Growth Sweden, 1988-1993

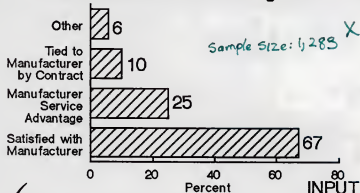


28 User Reasons for Choosing TPM

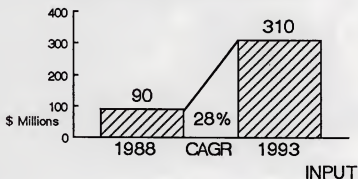




29 User Reasons for Not Using TPM



35 Manufacturer Growth



10 Major European TPM Companies 1988 X

	\$ Millions	TPM Market Share
Granada	134	16
Sorbus	53	6
Geveke	28	3
IBIMaint	27	3
Telub	26	3

30% of TPM Market INPUT

12 Major Country Markets 1988

	\$ Millions
U.K.	436
France	180
West Germany	155

67% of TPM Market: Western Europe INPUT



14 Independent Maintenance Market
Forecast-France

	\$ Millions		CAGR (%)
	1988	1993	
TPM Vendors	144	302	16
Dealers & Distributors	26	43	11
Hardware Manufacturers	10	37	30
Total	180	382	16

16 Independent Maintenance Market
Forecast-West Germany

	\$ Millions		CAGR (%)
	1988	1993	
TPM Vendors	90	170	13
Dealers & Distributors	62	105	11
Hardware Manufacturers	3	8	20
Total	155	283	13

18 Independent Maintenance Market
Forecast-Italy

	\$ Millions		CAGR (%)
	1988	1993	
TPM Vendors	66	125	14
Dealers & Distributors	30	52	12
Hardware Manufacturers	2	15	58° X
Total	98	182	15 X

20 Independent Maintenance Market
Forecast-Netherlands

	\$ Millions		CAGR (%)
	1988	1993	
TPM Vendors	76	156	16
Dealers & Distributors	6	12	14
Hardware Manufacturers	-	10	78
Total	82	178	17



22

Independent Maintenance Market Forecast-Spain

	\$ Millions		CAGR (%)
	1988	1993	
TPM Vendors	18	60	27
Dealers & Distributors	6	11	14
Hardware Manufacturers	7	25	27
Total	31	96	25

26

Independent Maintenance Market Forecast-United Kingdom

	\$ Millions		CAGR (%)
	1988	1993	
TPM Vendors	339	678	15
Dealers & Distributors	29	51	12
Hardware Manufacturers	68	178	21
Total	436	907	16

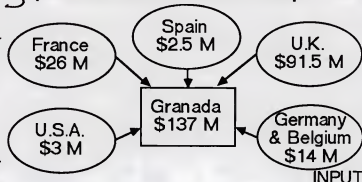
24

Independent Maintenance Market Forecast-Sweden

	\$ Millions		CAGR (%)
	1988	1993	
TPM Vendors	34	48	7
Dealers & Distributors	14	24	11
Hardware Manufacturers	-	3	60
Total	48	75	9

31

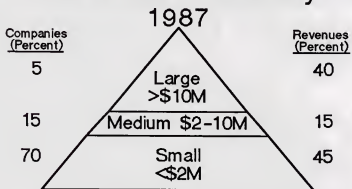
Granada Road Map





42

TPM Market Hierarchy

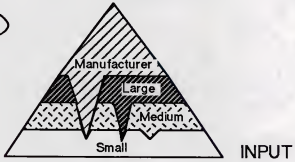


TPM Market Hierarchy

1992³

X

43



INPUT



The Independent Maintenance Market in Western Europe

Keith Hocking
Managing Director
INPUT Europe

Theme

Market ~~F~~orecast
Country Markets
Key ~~P~~layers
Emerging ~~T~~rends

1988 Survey Parameters

1,348 user interviews 5% TPM
75 TPM vendor interviews

European Independent Maintenance
Market Forecast 1988-1993

Independent Maintenance Market 1988

Independent Maintenance Market 1993

Market Dynamics

Geographic characteristics
Non-European product sales
Multinational trend
Mergers and acquisitions

Market Characteristics

Largest market: U.K. \$440 M 1988
Fastest growth: Spain CAGR 25%
Hardware manufacturers entry
Prime contracting

Western European Independent Maintenance

Key Activists

Hardware manufacturers
Multivendor service
Third-party maintenance companies
Key business activity
Dealers and distributors
Support sales

Independent Maintenance Market Forecast by Vendor Type

Major European TPM Companies 1988

Western European Country Markets

Major Country Markets 1988

Independent Maintenance Market Growth France 1988-1993

Independent Maintenance Market Forecast France

Independent Maintenance Market Growth West Germany 1988-1993

Independent Maintenance Market Forecast West Germany

Independent Maintenance Market Growth Italy 1988-1993



Independent Maintenance Market Forecast Italy
Independent Maintenance Market Growth Netherlands 1988-1993
Independent Maintenance Market Forecast Netherlands
Independent Maintenance Market Growth Spain 1988-1993
Independent Maintenance Market Forecast Spain
Independent Maintenance Market Growth Sweden 1988-1993
Independent Maintenance Market Forecast Sweden
Independent Maintenance Market Growth United Kingdom 1988-1993
Independent Maintenance Market Forecast United Kingdom

No Title

Why TPM?

Why not TPM.

User Reasons for Choosing TPM

User Reasons for Not Choosing TPM

Primary Growth Factors

TPM vendors—single source

Users—price

Satisfaction with Price

TPM user $\Delta SI = 1.2$ (Sample 65)

Overall user sample $\Delta SI = 1.3$ (Sample 1,348)

Primary Factors Inhibiting Growth

TPM vendors

Longer warranties and manufacturer competition

Users

Prefer manufacturer

Future of Independent Maintenance

Manufacturer multivendor activities

Mergers and acquisitions

Formal quality standards

Multinational TPM

Future of Independent Maintenance

TPM niche markets

TPM critical mass

Manufacturer Growth

Granada Acquisitions

European

SMS

DPCE

Mainstay

Granada Acquisitions

France

Infomat

Intersystem



Germany

WIGO

U.K.

CFM

Granada Road Map

TPM Critical Mass

1986 Bell Atlantic acquired Sorbus

1988 Sorbus acquired Bell Canada Int.

Bell Technical Services U.K.

Eurotech Services France/Italy

Dataway Germany

Sorbus name adopted in U.K. and France

TPM Expansion

Geographic

1988 Telub, leading TPM in Scandinavia acquired Bitronic
in Germany

Diversification

1989 concept, a leading software and services company
acquired spectral and MIS in France

TPM Expansion

Small acquires large

1989 El Tec, leading TPM in Spain acquired by Morsa

Manufacturer activity

1986 Olivetti acquired 65% share of IBIMaint, leading

TPM in Italy

INPUT Recommendations for TPMs

Critical mass

Specialisation

Niche markets

Vertical markets

TPM Market Hierarchy—1987

TPM Market Hierarchy—1993

Independent Maintenance

Conclusions

TPM dominance

Manufacturers high growth

Independent Maintenance

Conclusions

11% market share 1988

15% market share 1993

Independent Maintenance


Conclusions



TPM market growth three times larger than hardware maintenance

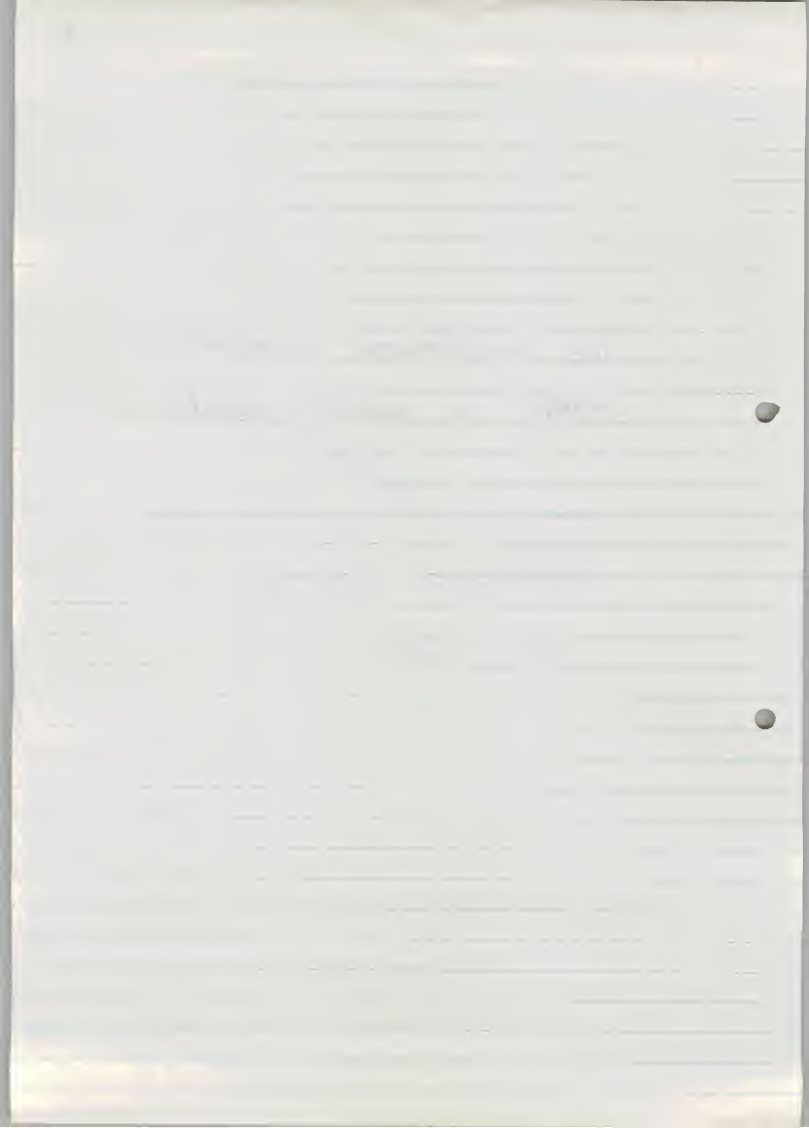


THE INDEPENDENT MAINTENANCE
MARKET IN WESTERN EUROPE



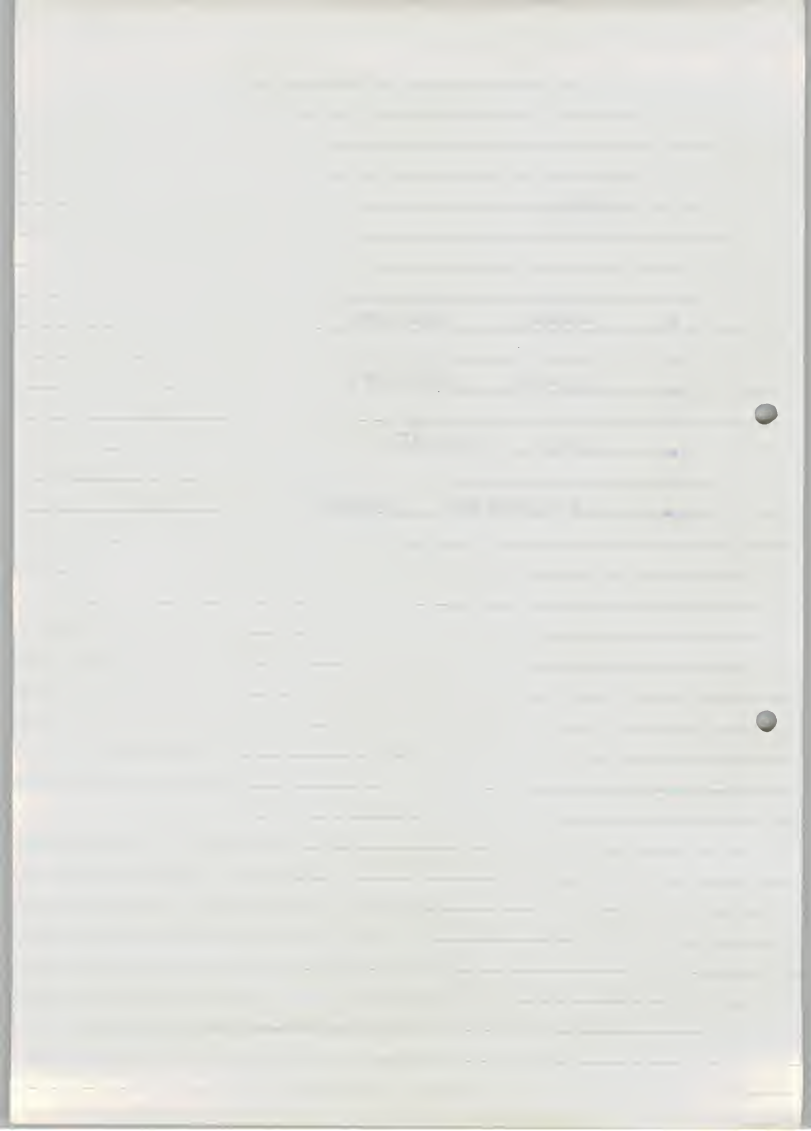
KEITH HOCKING
MANAGING DIRECTOR

INPUT EUROPE



THEME

- MARKET FORECAST
- COUNTRY MARKETS
- KEY PLAYERS
- EMERGING TRENDS



1988 SURVEY PARAMETERS

- 1348 USER INTERVIEWS
5% TPM
- 75 TPM VENDOR INTERVIEWS

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REPORT OF THE
COMMISSIONER OF THE GENERAL LAND OFFICE
FOR THE YEAR 1900

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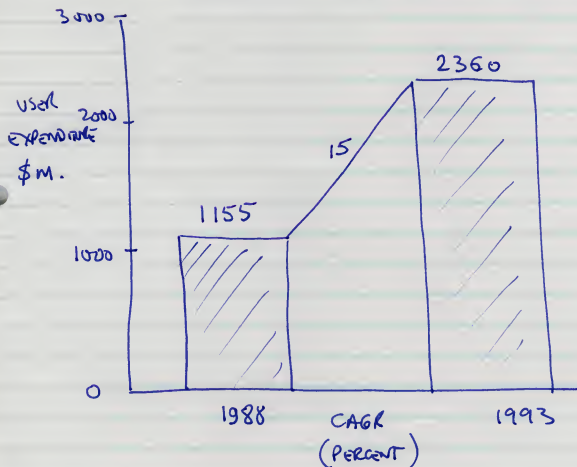
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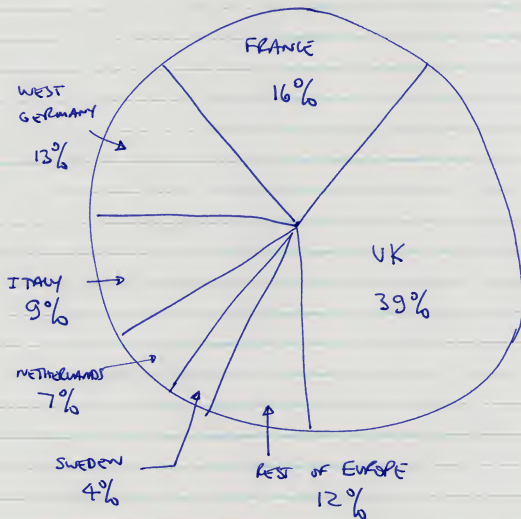
EUROPEAN INDEPENDENT MAINTENANCE
MARKET FORECAST 1988-1993



AE

INDEPENDENT MAINTENANCE MARKET 1988

\$ 1155 M



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BY

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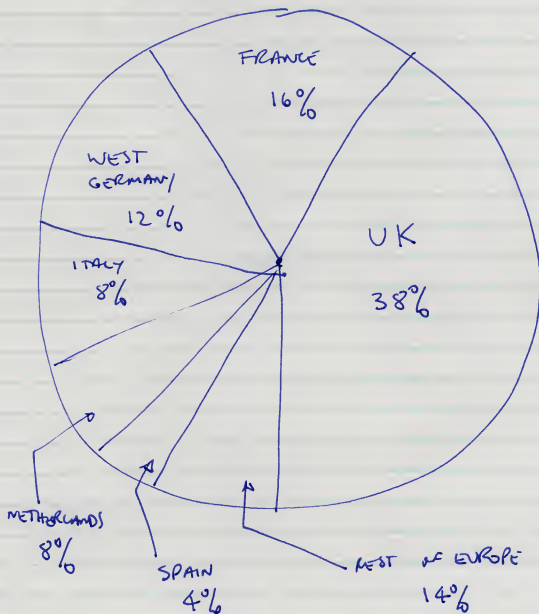
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INDEPENDENT MAINTENANCE MARKET 1993

\$2360 M



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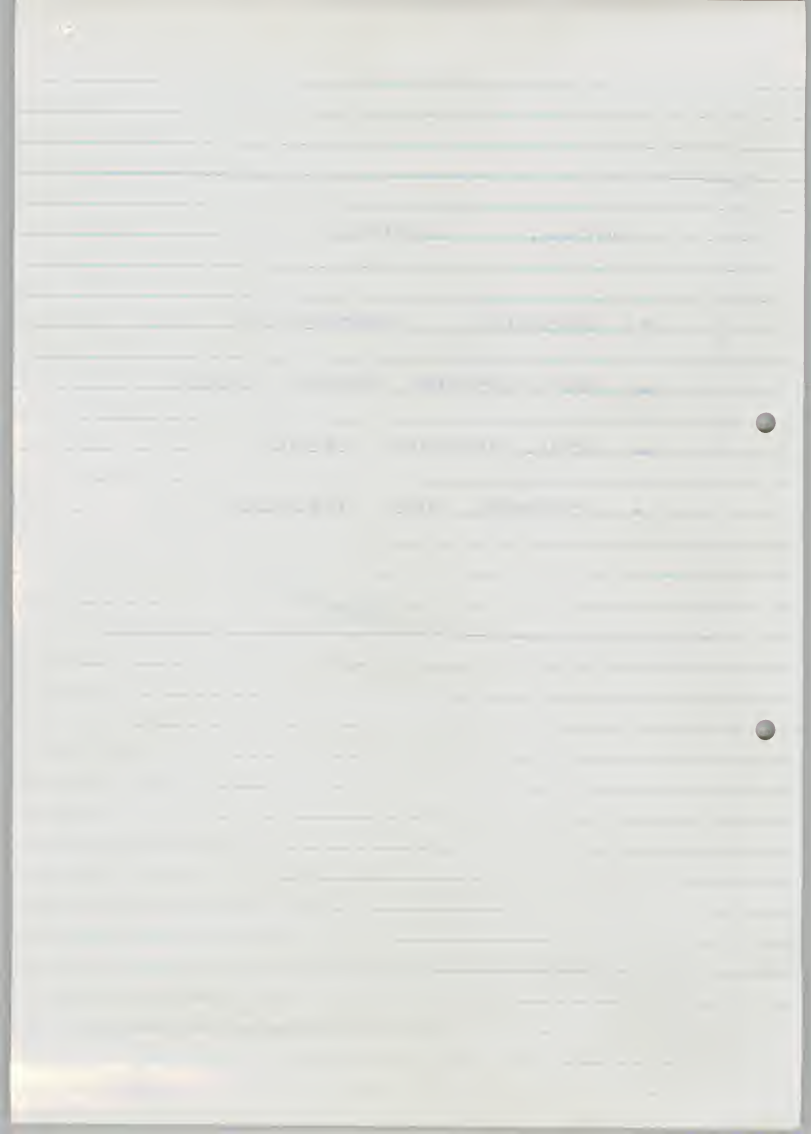
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MARKET DYNAMICS

- GEOGRAPHIC CHARACTERISTICS
 - NON-EUROPEAN PRODUCT SALES
 - MULTINATIONAL TREND
 - MERGERS AND ACQUISITIONS
- 



MARKET CHARACTERISTICS

- LARGEST MARKET: UK \$440m 1988
- FASTEST GROWTH : SPAIN CAGR 25%
- HARDWARE MANUFACTURERS ENTRY
- PRIME CONTRACTING

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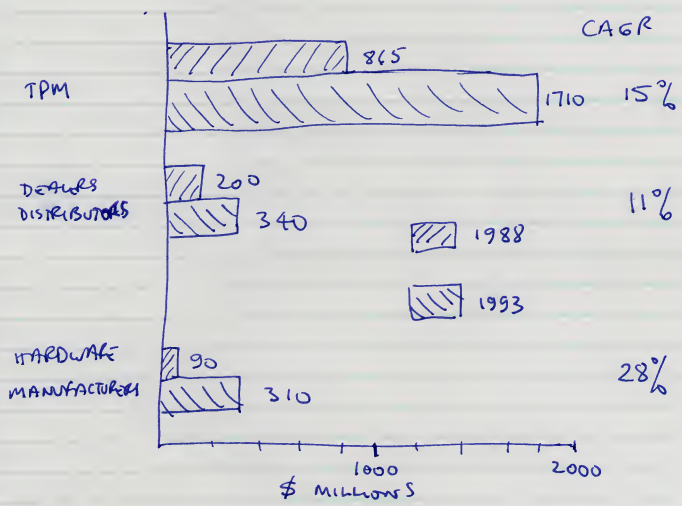
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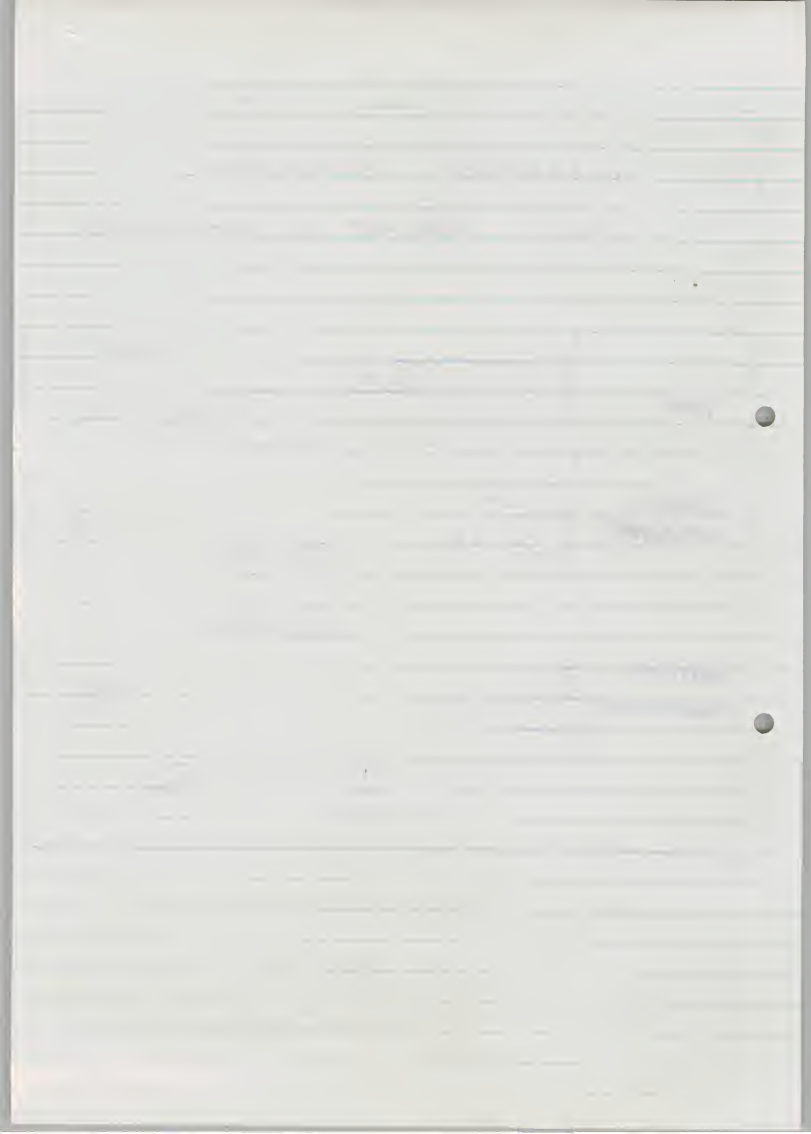
WESTERN EUROPEAN INDEPENDENT MAINTENANCE

KEY ACTIVISTS

- HARDWARE MANUFACTURERS
— MULTIVENDOR SERVICE
- THIRD PARTY MAINTENANCE COMPANIES
— KEY BUSINESS ACTIVITY
- DEALERS AND DISTRIBUTORS
— SUPPORT SALES.

INDEPENDENT MAINTENANCE MARKET FORECAST BY VENDOR TYPE





MAJOR EUROPEAN TPM COMPANIES 1988

	\$ m	TPM MARKET SHARE
• GRANADA	134	16%
• SORBUS	53	6%
• GEVEKE	28	3%
• IBIMANT	27	3%
• TELUB	26	3%

30% OF TPM MARKET

120

120

120

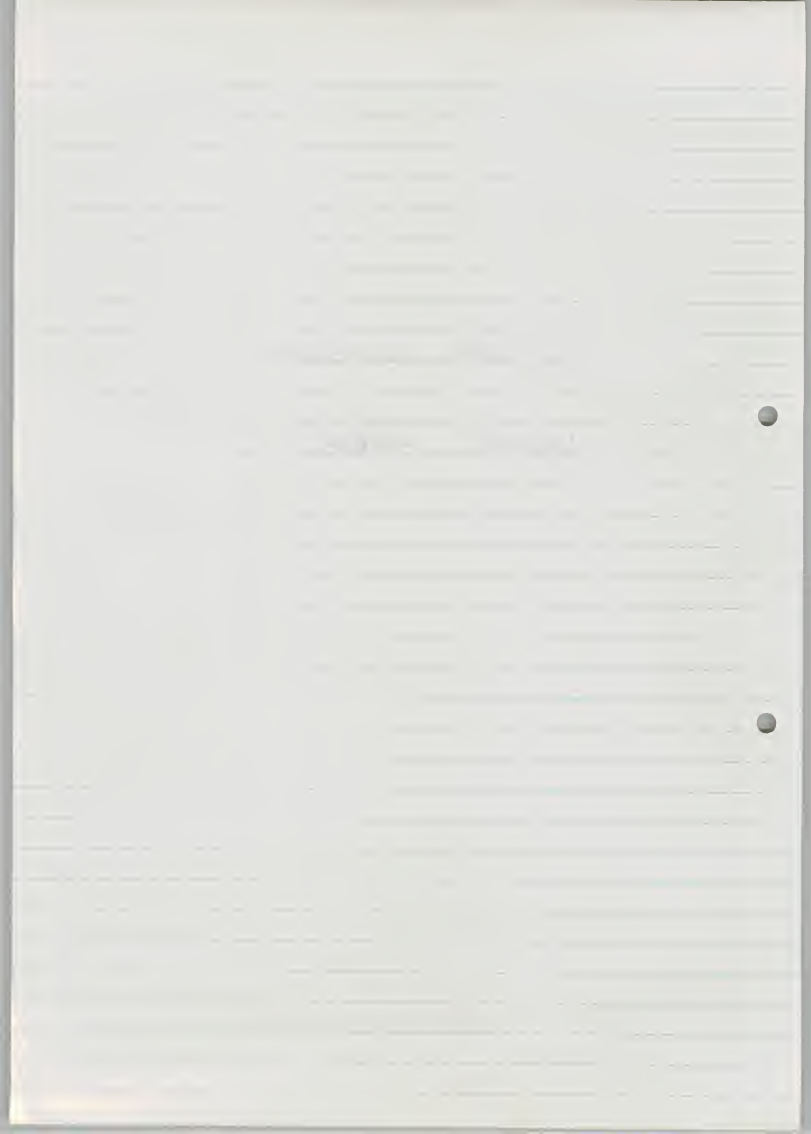
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WESTERN EUROPEAN

COUNTRY MARKETS



MAJOR COUNTRY MARKETS 1988

- UK \$ 436 M
- FRANCE \$ 180 M
- WEST GERMANY \$ 155 M

67% OF WESTERN EUROPE

1947-1948

1947-1948

1947-1948

1947-1948

1947-1948

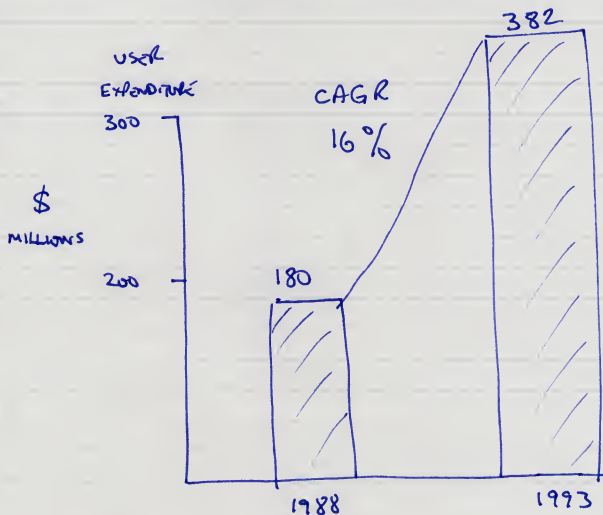
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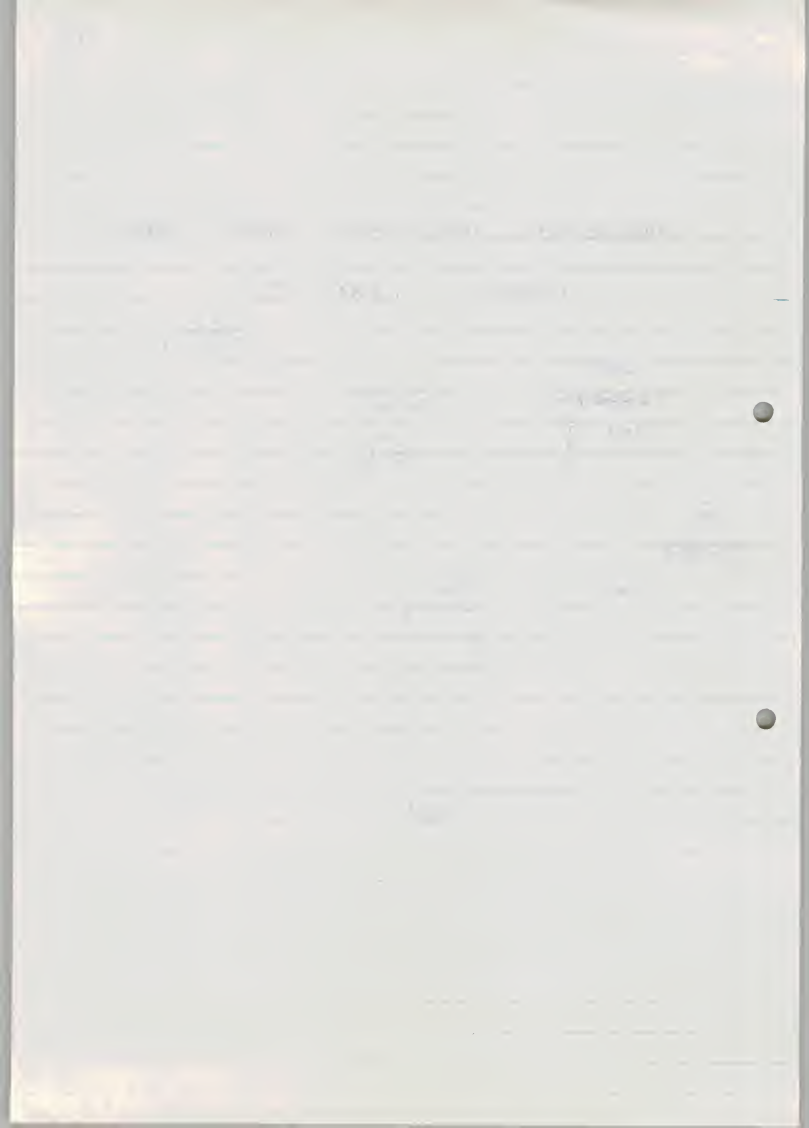
1947-1948

1947-1948

INDEPENDENT MAINTENANCE MARKET GROWTH

FRANCE 1988 - 1993





INDEPENDENT MAINTENANCE MARKET FORECAST
FRANCE (\$ MILLIONS)

	1988	1993	CAGR
TPM VENDORS	144	302	16%
DEALERS AND DISTRIBUTORS	26	43	11%
HARDWARE MANUFACTURERS	10	37	30%
TOTAL	<hr/> 180	<hr/> 382	<hr/> 16%

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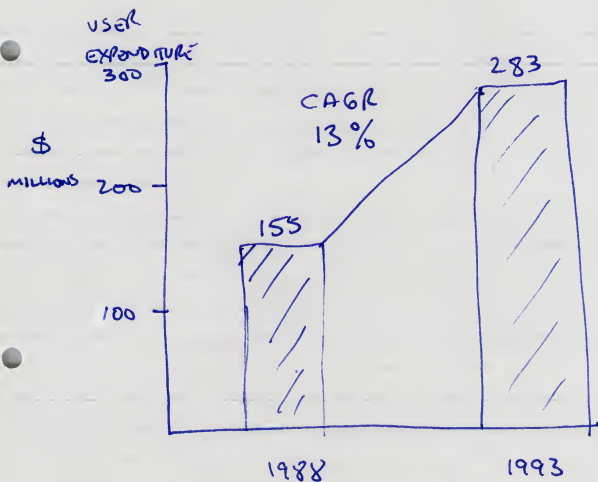
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INDEPENDENT MAINTENANCE MARKET GROWTH

WEST GERMANY 1988 - 1993



INDEPENDENT MAINTENANCE MARKET FORECAST

WEST GERMANY (\$ MILLIONS)

	1988	1993	CAGR
TPM VENDORS	90	170	13 %
DEALERS AND DISTRIBUTORS	62	105	11 %
HARDWARE MANUFACTURERS	3	8	20 %
TOTAL	<u>155</u>	<u>283</u>	<u>13%</u>

1940-1941

1942-1943

1944-1945

1946-1947

1948-1949

1950-1951

1952-1953

1954-1955

1956-1957

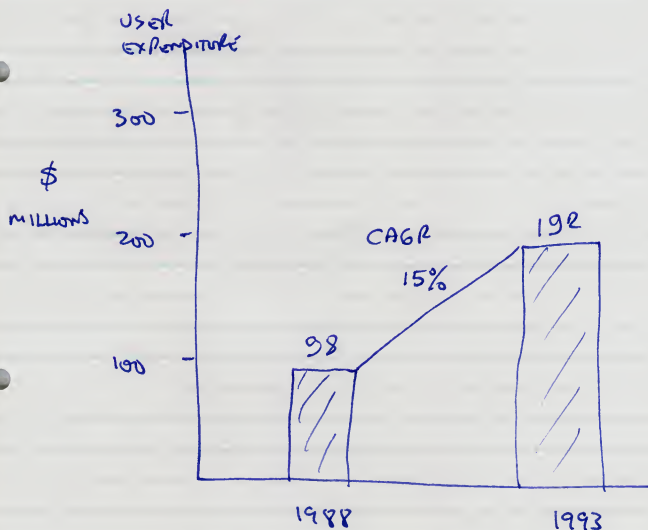
1958-1959

1960-1961

1962-1963

INDEPENDENT MAINTENANCE MARKET GROWTH

ITALY 1988-1993



1900

1900

1900

INDEPENDENT MAINTENANCE MARKET FORECAST

ITALY (\$ MILLIONS)

	1988	1993	CAGR
TPM VENDORS	66	125	14%
DEALERS AND DISTRIBUTORS	30	52	12%
HARDWARE MANUFACTURERS	2	15	58%
TOTAL	<hr/> 98	<hr/> 192	<hr/> 15%

37

1898

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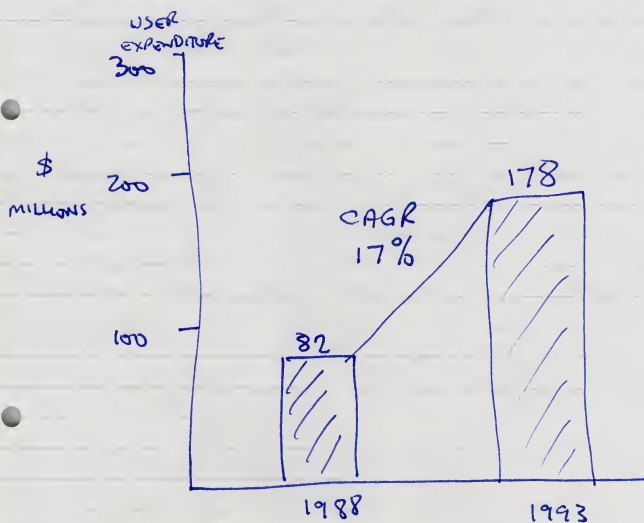
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INDEPENDENT MAINTENANCE MARKET GROWTH

NETHERLANDS 1988-1993



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INDEPENDENT MAINTENANCE MARKET FORECAST
NETHERLANDS (\$ MILLIONS)

	1988	1993	CAGR
TPM VENDORS	76	156	16%
DEALERS AND DISTRIBUTORS	6	12	14%
HARDWARE MANUFACTURERS	—	10	78%
TOTAL	<hr/> 82	<hr/> 178	<hr/> 17%

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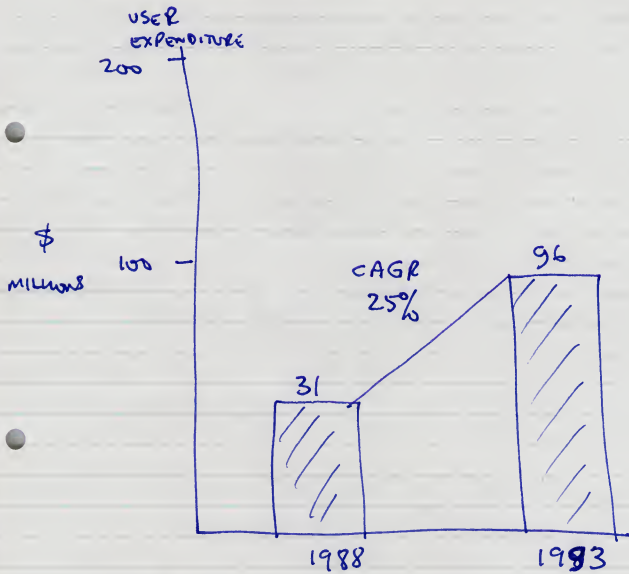
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INDEPENDENT MAINTENANCE MARKET GROWTH

SPAIN 1988-1993



26

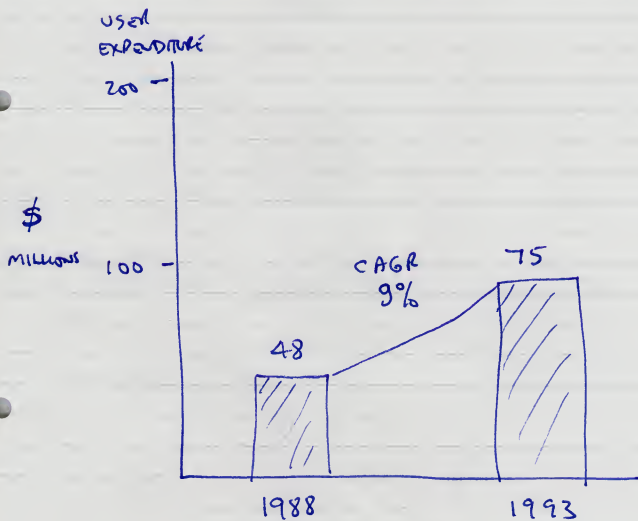
INDEPENDENT MAINTENANCE MARKET FORECAST

SPAIN (\$ MILLIONS)

	1988	1993	CAGR
TPM VENDORS	18	60	27%
DEALERS AND DISTRIBUTORS	6	11	14%
HARDWARE MANUFACTURERS	7	25	27%
TOTAL	<hr/> 31	<hr/> 96	<hr/> 25%

INDEPENDENT MAINTENANCE MARKET GROWTH

SWEDEN 1988 - 1993



INDEPENDENT MAINTENANCE MARKET FORECAST

SWEDEN (\$ millions)

	1988	1993	CAGR
TDM VENDORS	34	48	7%
DEALERS AND DISTRIBUTORS	14	24	11%
HARDWARE MANUFACTURERS	—	3	60%
TOTAL	<u>48</u>	<u>75</u>	<u>9%</u>

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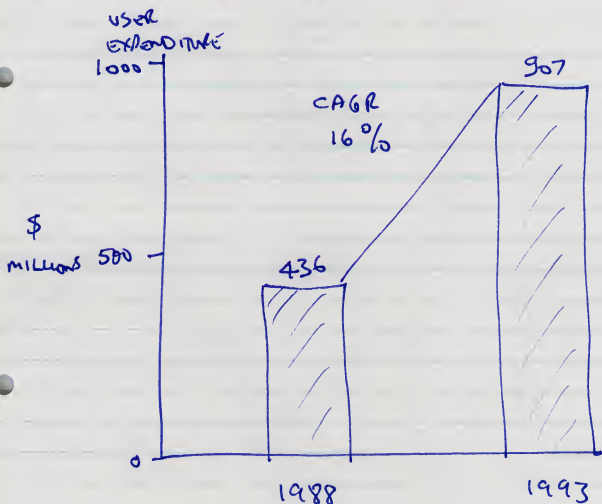
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INDEPENDENT MAINTENANCE MARKET GROWTH

UNITED KINGDOM 1988-1993



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10000 10000 10000 10000 10000

$$\frac{1}{\sqrt{1-\beta^2}} = \frac{1}{\sqrt{1-\frac{v^2}{c^2}}}$$

INDEPENDENT MAINTENANCE MARKET FORECAST

UNITED KINGDOM (\$ MILLIONS)

	1988	1993	CAGR
TPM VENDORS	339	678	15%
DEALERS AND DISTRIBUTORS	29	51	12%
HARDWARE MANUFACTURERS	68	178	21%
TOTAL	<hr/> 436	<hr/> 907	<hr/> 16%

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main results of the paper.

2. The second part of the paper is devoted to a discussion of the

main results of the paper.

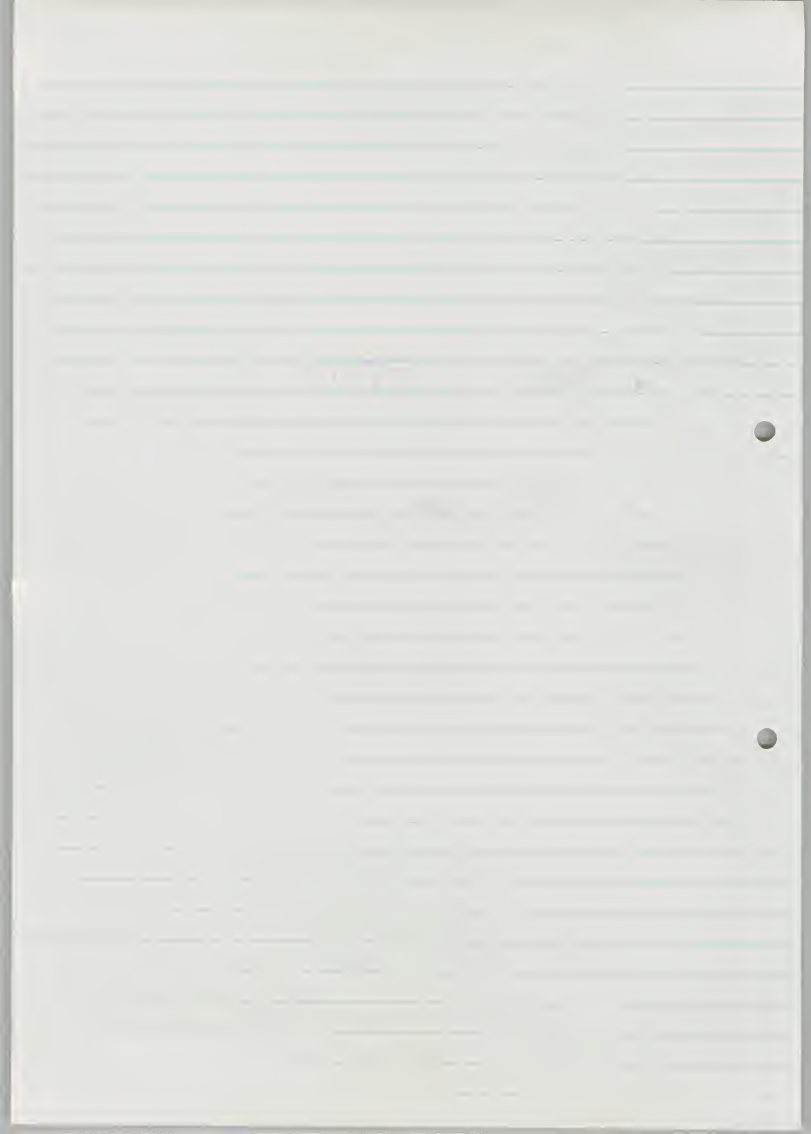
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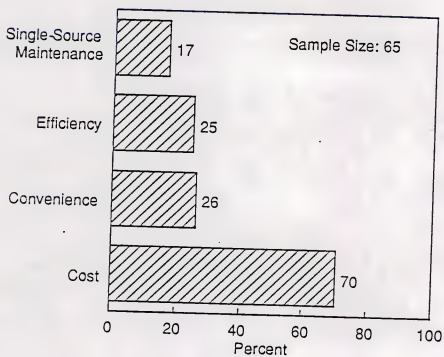
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- WHY TPM ?

- WHY NOT TPM .

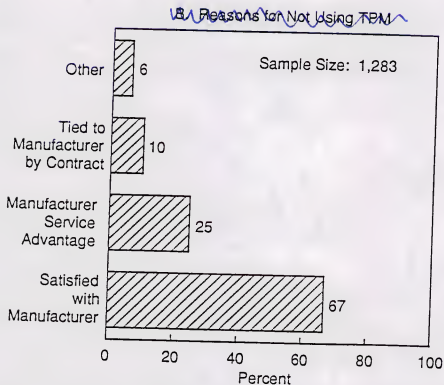


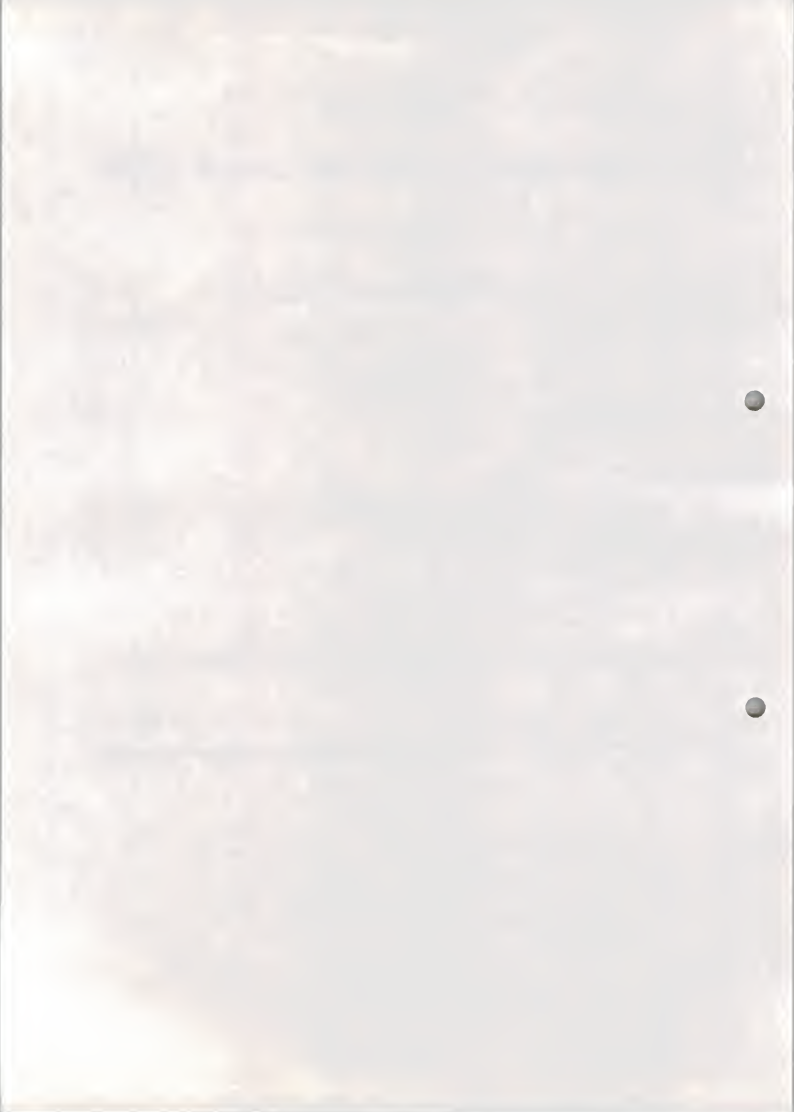
USER REASONS FOR CHOOSING TPM





USER REASONS FOR NOT USING TPM

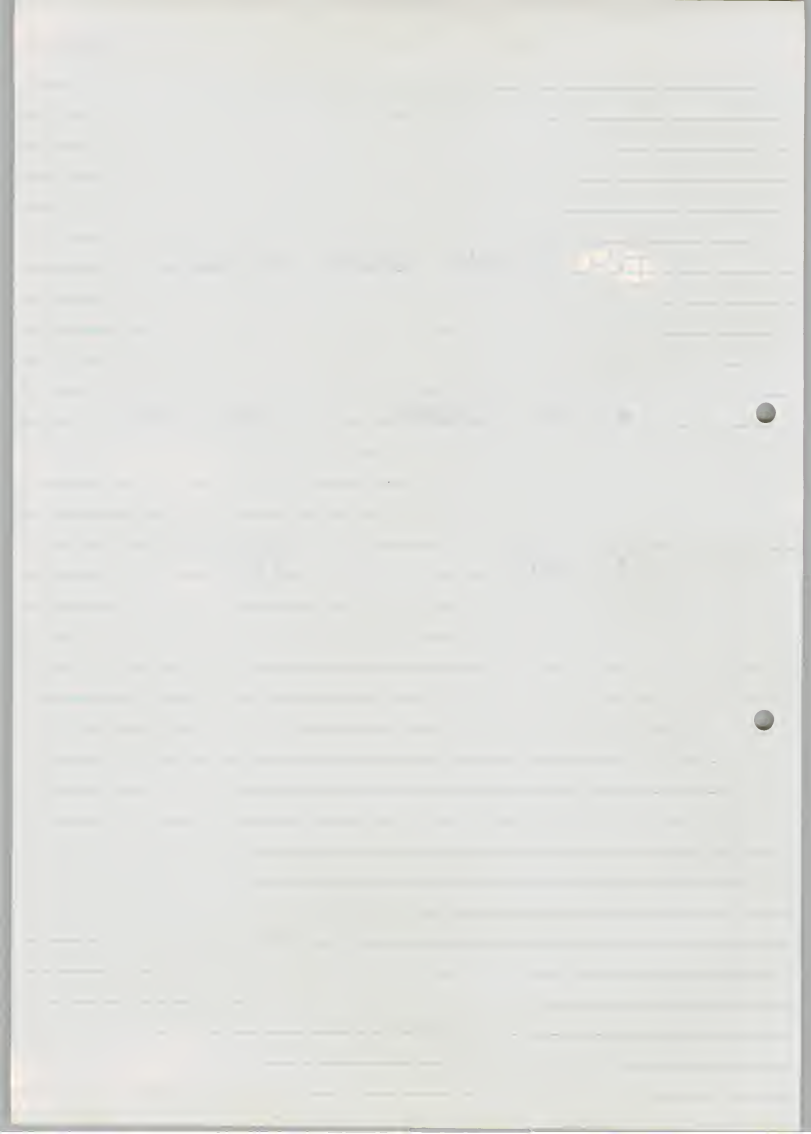




PRIMARY GROWTH FACTORS

• TPM VENDORS — SINGLE SOURCE

• USERS — PRICE



SATISFACTION WITH PRICE

- TPM USER $\Delta SI = 1.2$
(SAMPLE 65)
- OVERALL USER SAMPLE $\Delta SI = 1.3$
(SAMPLE 1348)

10

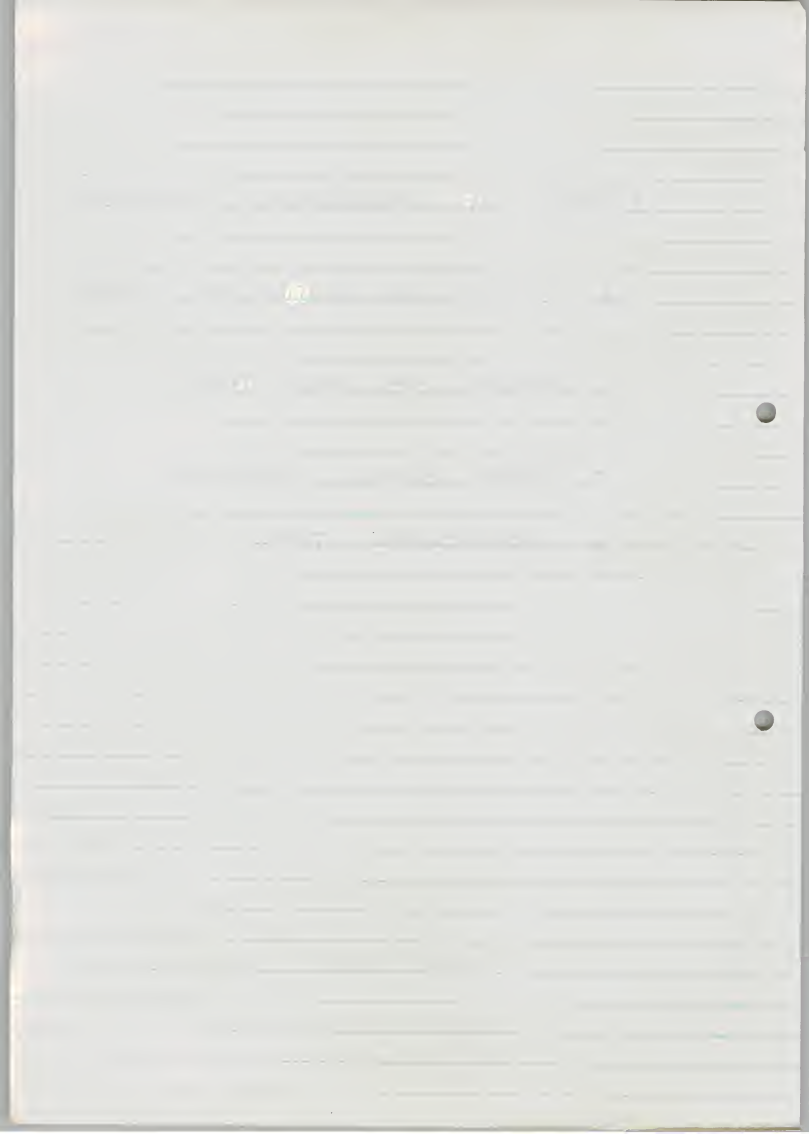
PRIMARY FACTORS INHIBITING GROWTH

- TPM VENDORS — LONGER WARRANTIES
AND MANUFACTURER COMPETITION
- USERS — PREFER MANUFACTURER

Therapy - 2000 - 2001

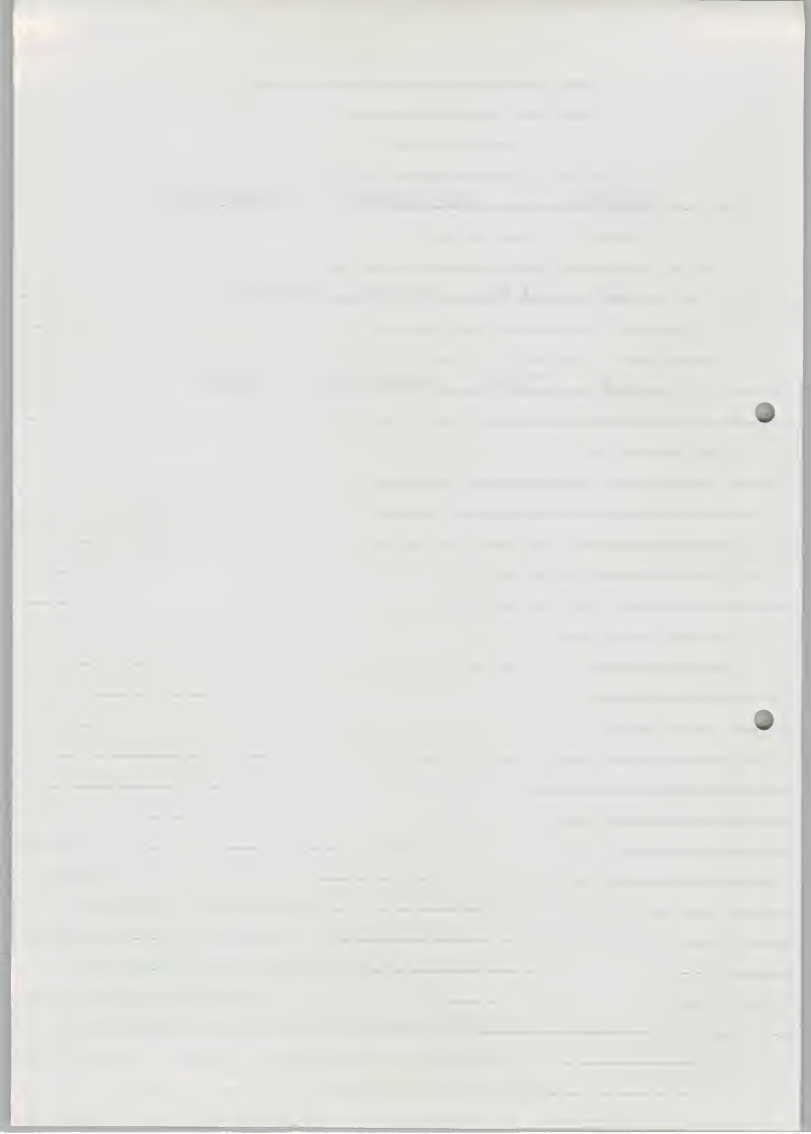
FUTURE OF INDEPENDENT MAINTENANCE

- MANUFACTURER MULTI-VENDOR ACTIVITIES
- MERGERS AND ACQUISITIONS
- FORMAL QUALITY STANDARDS
- MULTINATIONAL TPM.

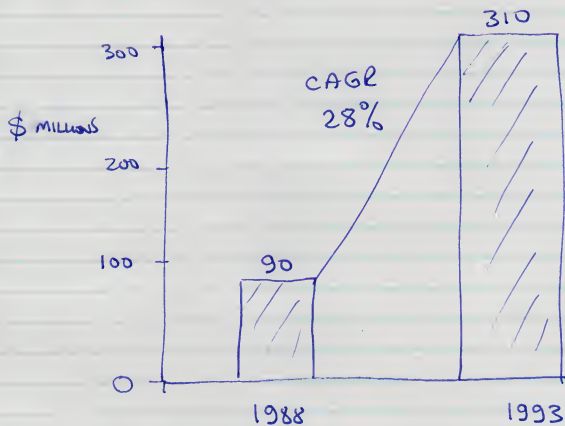


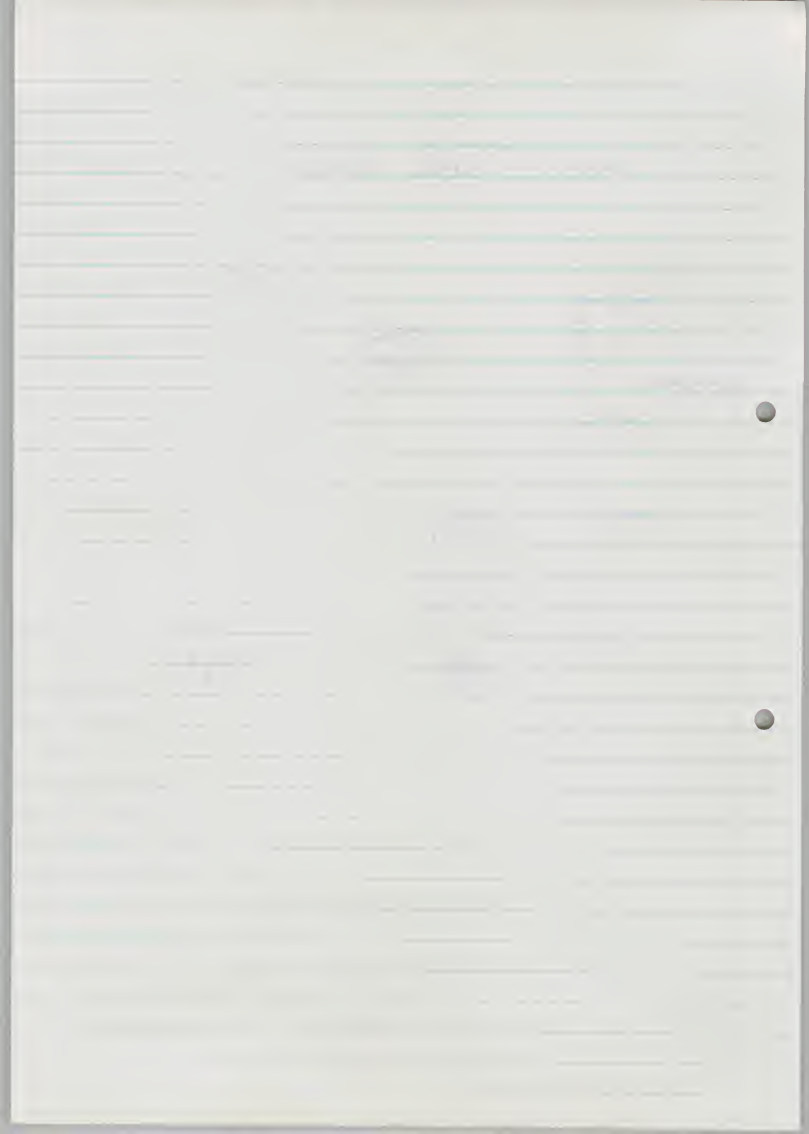
FUTURE OF INDEPENDENT MAINTENANCE

- TPM NICHE MARKETS
- TPM CRITICAL MASS.



MANUFACTURER GROWTH





GRANADA ^C
ACQUISITIONS

EUROPEAN

SMS
DPCE
MAINSTAY

FRANCE

INFOMAT
INTERSYSTEM

GERMANY

WIGO

UK

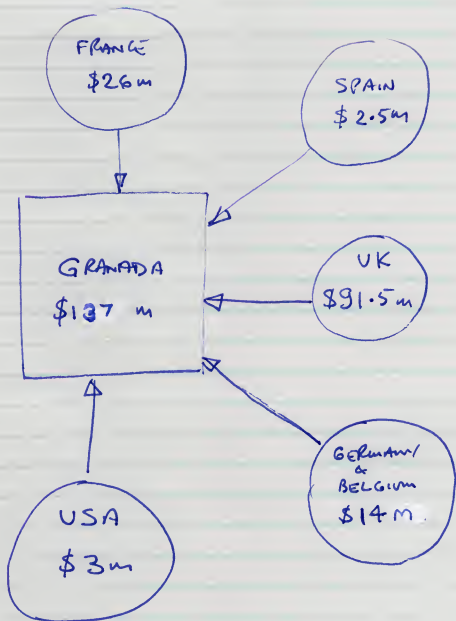
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MAP



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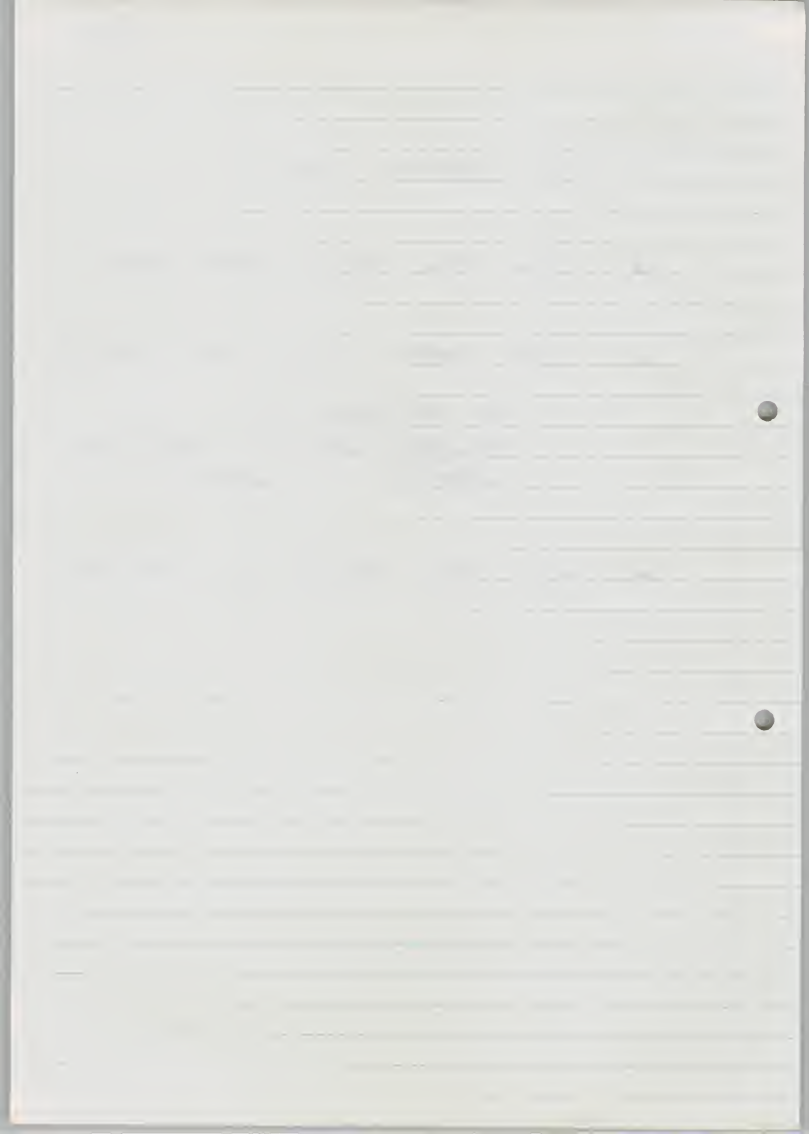
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~~38~~

TPM CRITICAL MASS

- 1986 BELL ATLANTIC ACQUIRED SORBUS
- 1988 SORBUS ACQUIRED BELL CANADA INT.
 - BELL TECHNICAL SERVICES UK
 - EURO TECH SERVICES FRANCE/ITALY
 - DATAWAY GERMANY
- SORBUS NAME ADOPTED IN UK AND FRANCE



TPM EXPANSION

• GEOGRAPHIC

- 1988 TELUB, LEADING TPM IN SCANDINAVIA ACQUIRED BITRONIC IN GERMANY

• DIVERSIFICATION

- 1989 CONCEPT, A LEADING SOFTWARE AND SERVICES COMPANY ACQUIRED SPECTRAL AND MIS IN FRANCE

TPM EXPANSION

• SMALL ACQUIRES LARGE

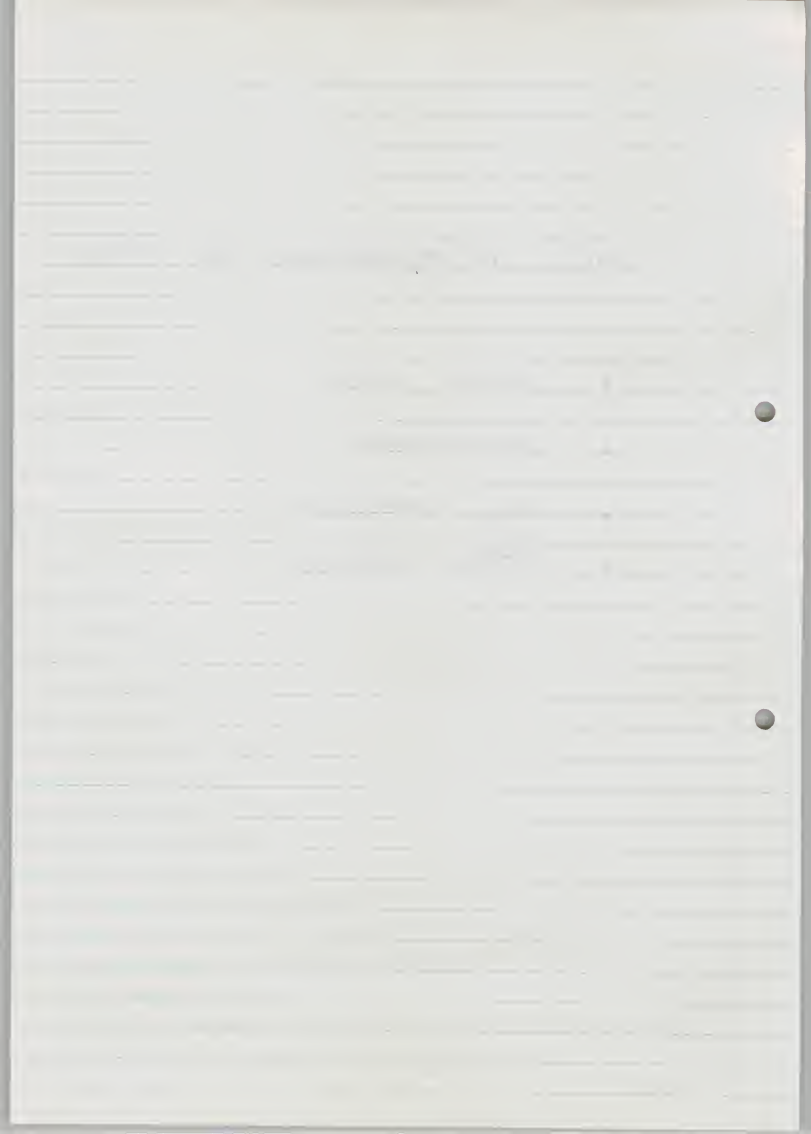
- 1989 EL TEC, LEADING TPM IN SPAIN ACQUIRED BY MORSA

• MANUFACTURER ACTIVITY

- 1986 OLIVETTI ACQUIRE 65% SHARE OF IBIMANT, LEADING TPM IN ITALY

INPUT RECOM^MENDATIONS FOR TPM'S

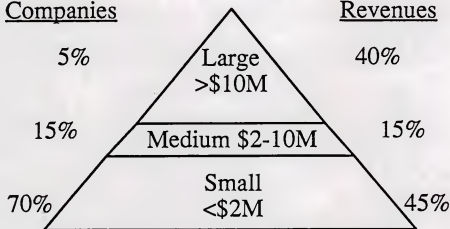
- CRITICAL MASS
- SPECIALISATION
- NICHE MARKETS
- VERTICAL MARKETS



TPM Market Hierarchy-1987

Companies

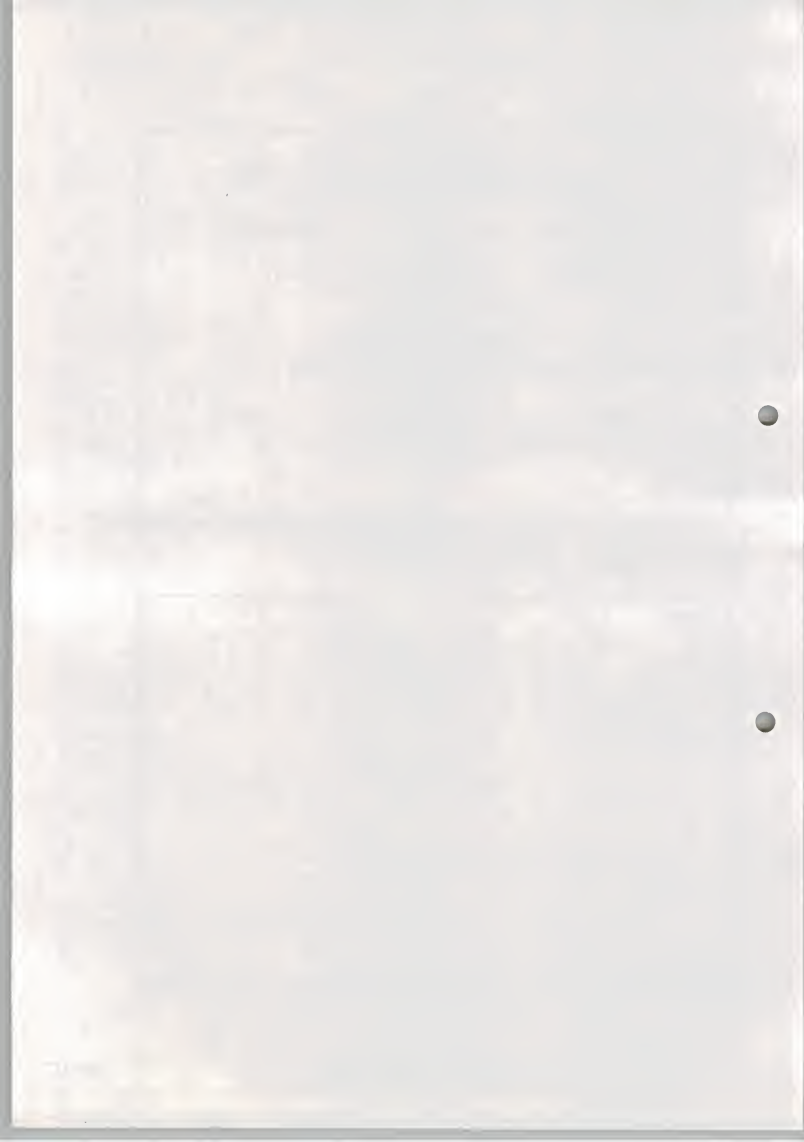
Revenues



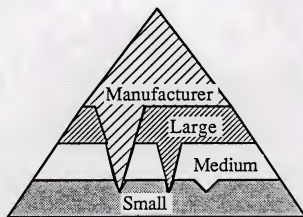
INPUT

NOTES:

CSPE MA-19



TPM Market Hierarchy-199~~8~~3



INPUT

NOTES:

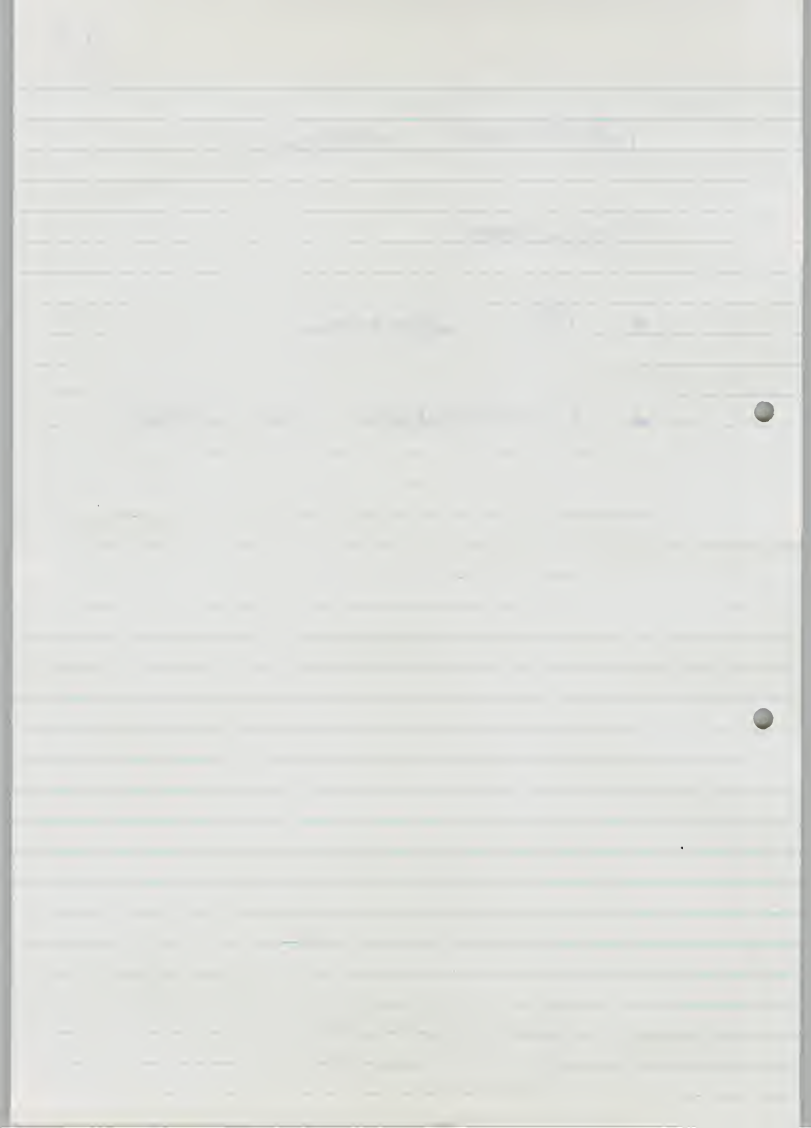
CSPE MA-20



INDEPENDENT MAINTENANCE

CONCLUSIONS

- TPM DOMINANCE
- MANUFACTURERS HIGH GROWTH



INDEPENDENT MAINTENANCE

CONCLUSIONS

- 11% MARKET SHARE 1988
- 15% MARKET SHARE 1993



INDEPENDENT MAINTENANCE

CONCLUSIONS

- ① TPM MARKET GROWTH THREE TIMES LARGER THAN HARDWARE MAINTENANCE

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